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FISCAL YEAR ENDED JUNE 30, 1911



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*Philippine Islands. Dept. of the interior*

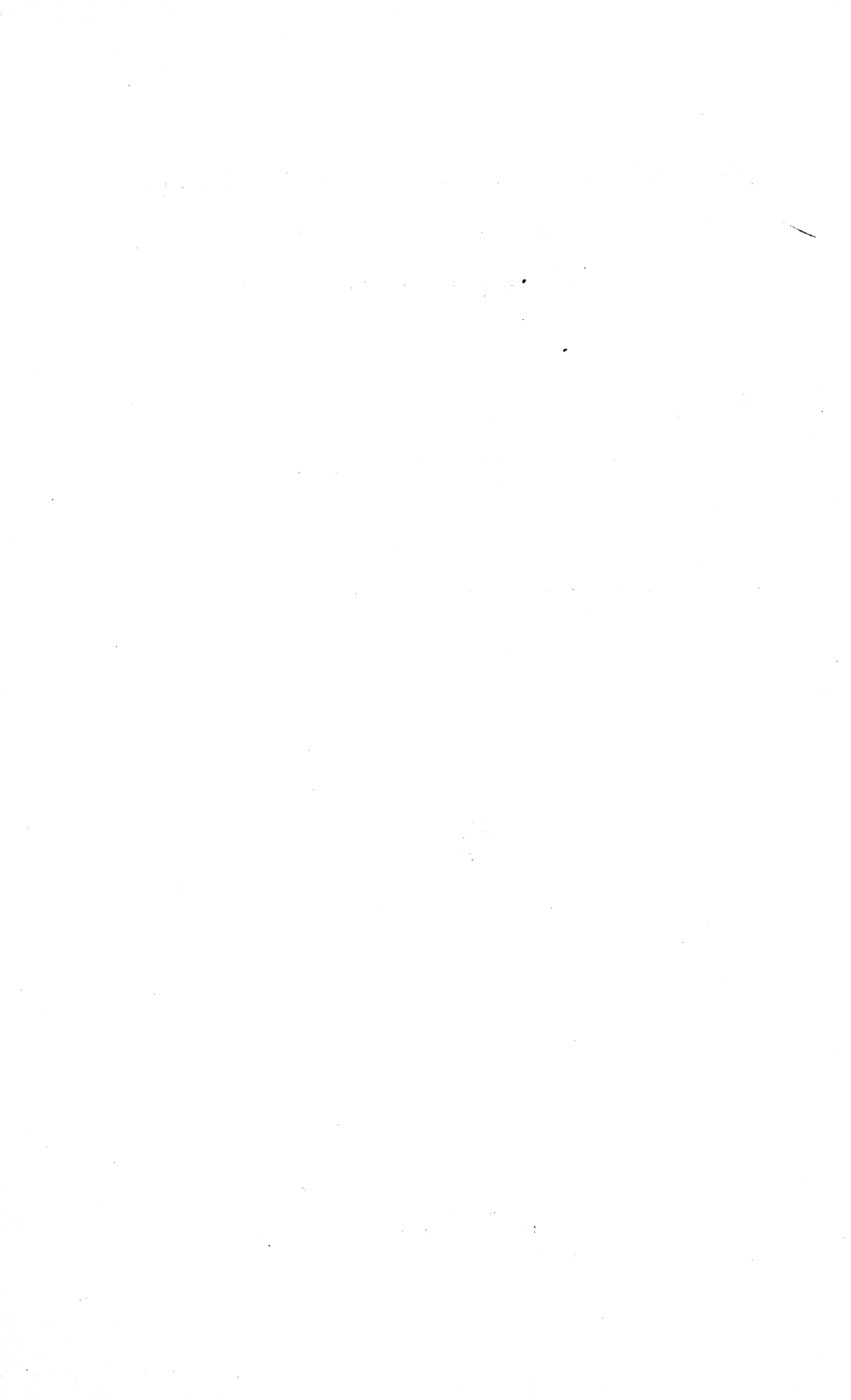
# ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR

FOR THE  
FISCAL YEAR ENDED JUNE 30, 1911

THE GOVERNMENT OF THE PHILIPPINE ISLANDS  
DEPARTMENT OF THE INTERIOR



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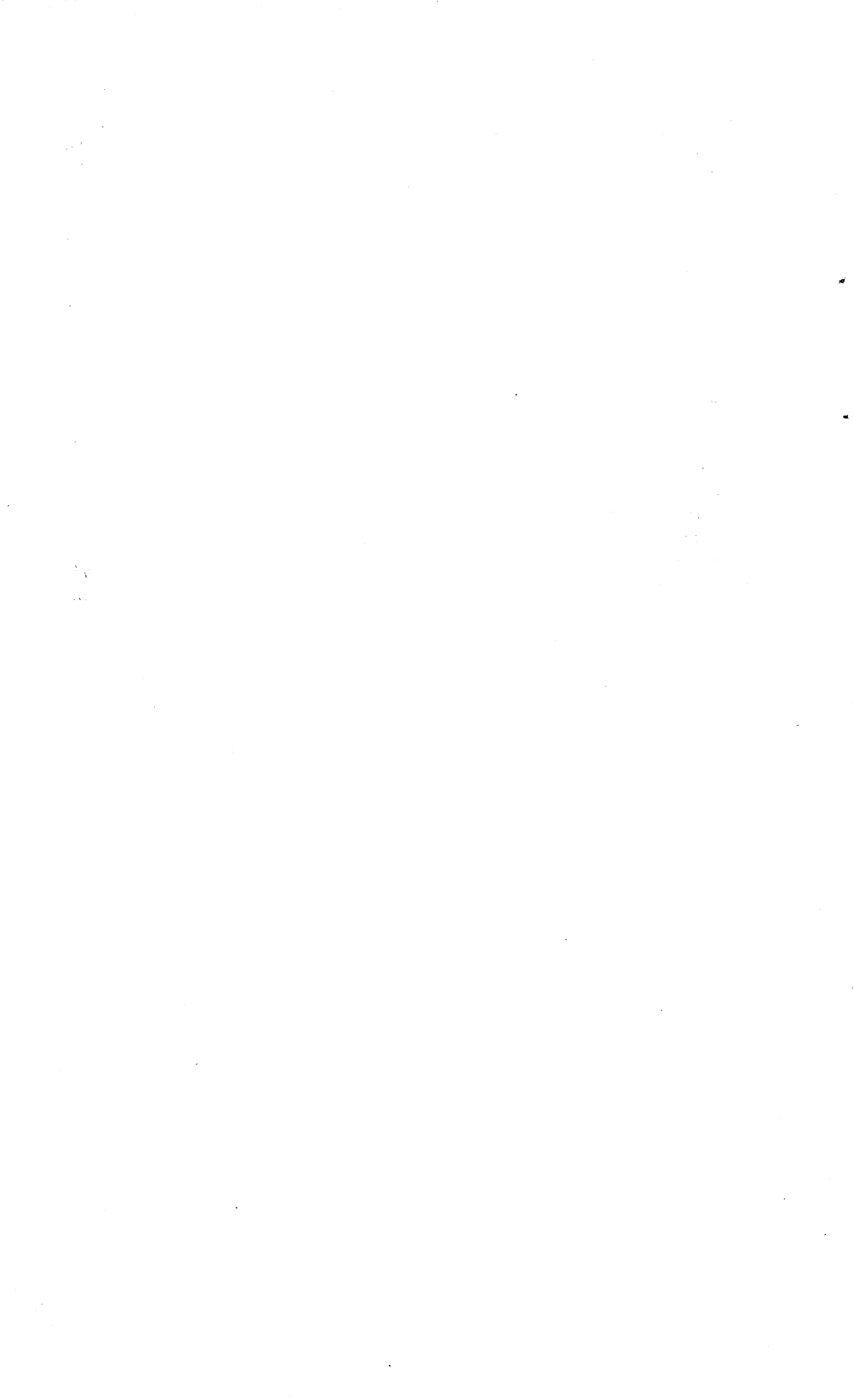


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# ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR.

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THE GOVERNMENT OF THE PHILIPPINE ISLANDS,  
DEPARTMENT OF THE INTERIOR,  
*Manila, August 29, 1911.*

GENTLEMEN: I have the honor to present the tenth annual report of the operations of the Department of the Interior, which, unless otherwise expressly stated, covers the year ended June 30, 1911.

## WORK FOR THE NON-CHRISTIAN TRIBES.

Work for the non-Christian tribes in the so-called special government provinces has on the whole progressed very steadily during the year. An unfortunate and unprecedented situation arose through the fact that accrued leave became due to nearly every officer engaged in this work who did not already have it *overdue*. The physical condition of several of the men rendered it imperative that they should be allowed to take leave at the same time, however ill their services could be spared. Willingness on the part of others to forego their rights and patiently to await the return of those who left the Islands, and good fortune in securing the service of very competent men to assist in carrying on the work of the absentees, have made it possible to get through the year without serious interruptions.

## THE SITUATION REVIEWED BY PROVINCES AND SUBPROVINCES.

I will briefly review the situation in each special government province or subprovince.

### NUEVA VIZCAYA.

Governor W. C. Bryant visited the United States on leave, having previously served in the Islands so long that, under the law, leave had ceased to accrue in his case. He had been authorized to start for home at the time of the so-called Mandac rebellion, a local uprising of insignificant importance stirred up by an ex-governor of Ilocos Norte, who, upon being convicted of murder, made his escape and took to the hills. He ultimately reached Nueva Vizcaya, entering the province disguised as an

Aglipayan priest. After remaining for a brief time at the town of Solano, he established his headquarters at a small and remote barrio, and planned a coup which was to include, among other things, the seizure of the arms of a garrison of Philippines Constabulary at Bayombong, the provincial capital. Assisted by several men of education and intelligence, he gathered a band of ignorant dupes by playing upon their credulity and their superstition. The plot might have met with some initial success had not the township secretary of Solano, who was one of Mandac's chief confederates, become alarmed and sent word to him that the uprising must come off at once as the principal conspirators were about to be arrested. As a result it took place prematurely and was promptly and very effectively ended. Mandac and his principal associates were captured, tried, convicted, and sentenced to long terms of imprisonment. Most of his ignorant followers were allowed to go their way unmolested, but as a lesson to others a few of the more responsible among them were arrested and tried. They received short jail sentences. There existed absolutely no known motive for this uprising so far as the common people who were engaged in it were concerned, but its occurrence demonstrates the power which can be exerted for evil by a clever and unscrupulous criminal who knows how to play upon popular ignorance and superstition.

Owing to the activity of Mr. Norman G. Conner, who served as provincial governor during the absence of Governor Bryant, and to that of Mr. H. J. Detrick, the assistant to the provincial governor for work among the Ilongots with headquarters at Baler, our knowledge of the Ilongots has been materially increased, and it has been possible to get into closer touch with them.

They are forest inhabiting savages whose physical characteristics demonstrate their possession of a considerable admixture of Negrito blood. Many of them show a decided tendency to lead the nomadic life of the Negritos, while others have fairly permanent sites for their little villages, practically all of which have now been visited without misadventure either to their inhabitants or to Government officials.

Steady progress is being made in the construction of a good horse trail into the more thickly settled portion of their territory, but owing to the sparsity of the population and the tremendous distances which separate villages, it will never be possible either to construct or to maintain at reasonable expense any such system of horse trails in the Ilongot country as has been

established in the Mountain Province. Visiting officials must make their trips on foot for the most part, and the work of building a system of footpaths will begin in the near future.

On the occasion of my last annual inspection trip there was assembled to meet me at Campote the largest and most representative gathering of Ilongots ever yet brought together, and it is anticipated that next year's gathering will be still larger.

There has been no known case of aggression by Ilongots against white persons or Filipinos during the year, although the more remote settlements continue to fight among themselves.

The effort to find a practical route for a trail from Baler to one of the Filipino settlements in Nueva Ecija was successful; but as the estimated cost of building such a trail was ₱45,000, and as investigation proved, contrary to expectation, that the forest through which it would pass are without Ilongot inhabitants and consequently do not form part of Nueva Vizcaya, it is impracticable for that province to construct it. In my opinion it ought to be constructed, as the people of Baler are now cut off from communication with the outside world during a not inconsiderable portion of the year.

#### THE SITUATION IN THE MOUNTAIN PROVINCE AND ITS SEVERAL SUBPROVINCES.

The work of the government of the Mountain Province has suffered but one interruption during the year. It proved desirable to accept the resignation of Lieutenant-Governor Blas Villamor of Apayao, and Lieutenant Clark of the Philippine Constabulary was appointed acting lieutenant-governor in his stead. At this time word was apparently spread among the wild Tingians of this subprovince that there was to be a change in the established kindly policy of the Government and that they were to be harshly dealt with. There was absolutely no foundation for such statements, yet they caused the temporary abandonment of a number of villages and interfered seriously with the progress of the work which had been inaugurated in this subprovince.

During the year the subprovincial launch used in maintaining communication between Tait and the sea coast went out of commission through neglect. A considerable sum was expended on the construction of a road from Ngagan, the usual head of navigation of the Abulug River, to Tait, the subprovincial capital without the accomplishment of any real construction work. Substantial progress was, however, made on the Apayao portion of the trail system which is to form a part of the main

line north from Twin Peaks in Benguet to Claveria on the coast of northern Luzon, and will in the near future connect with the other portion of this line which at present extends from Baguio to the northern boundary of the subprovince of Kalinga.

The most important piece of new work remaining to be done in northern Luzon is in the subprovince of Apayao, in many parts of which headhunting is still unchecked. Mr. Norman G. Conner, who served as governor of Nueva Vizcaya during Governor Bryant's absence, and whose experience with the Ilongots will be of great assistance to him in his new field, will be appointed lieutenant-governor of Apayao in the near future, and it is hoped that it may be possible to report decided improvement in the situation in this subprovince at the end of the next fiscal year. Meanwhile it is worthy of note that during the year just ended there has been no case of attack upon whites or upon Filipinos by the rather warlike people of this subprovince.

#### THE SITUATION IN THE SUBPROVINCE OF BONTOC.

In Bontoc, as in the other remaining subprovinces of the Mountain Province, there has been no serious disturbance of public order during the year. The new provincial building and the building which is to serve as a penitentiary for the hill people of northern Luzon have been practically completed. Each structure is admirably suited to its purpose and both are substantially constructed. A small modern hospital building is rapidly approaching completion, and when equipped will be of inestimable value to the people of this region, who are now for the most part more than willing to give up their ancient custom of endeavoring to cure their physical ills by placating the spirits of the dead, and show a rather touching confidence in the ability of the white man to afford them relief.

A ditch which will furnish the town of Bontoc with an abundant supply of pure mountain water has been nearly completed.

Road and trail work has been largely confined to improvement of the main line from the Lepanto boundary to Bontoc and from Bontoc to the Ifugao boundary at the crest of the Polis Range, the Cervantes-Bontoc trail having been widened sufficiently to make its use feasible by narrow-tread carts shortly after the visit of the Secretary of War.

The people of the subprovince of Bontoc have, with insignificant exceptions, coöperated cheerfully with the Government in the construction of public works and the apprehension of criminals. The few cases of head taking which have occurred have been promptly and effectively dealt with.

## THE SITUATION IN THE SUBPROVINCE OF IFUGAO.

Lieutenant-Governor Jeff D. Gallman of the subprovince of Ifugao, to whose individual effort is largely due the establishment of most satisfactory conditions among its population of approximately 125,000 people who until recently were inveterate head-hunters, went to the United States on well-earned and long-overdue leave. His duties have been performed during his absence in a most satisfactory manner by Lieutenant Owen A. Tomlinson, Philippine Constabulary. The condition of public order in the subprovince has left practically nothing to be desired. Some 24,000 men labored ten days each on road and trail work. Existing trails were not only well maintained, but were in many instances widened, straightened and otherwise improved, while much new trail was constructed. It did not prove possible to complete the trail between Banaue, Ifugao, and Bugias, Benguet, quite to the Benguet boundary as the necessary explosives did not arrive in time. The disinclination of vessels engaged in the interisland trade to transport dynamite and powder is a constant source of irritation to the officials of the special government provinces, and of delay in the carrying out of road and trail work which it is their duty to perform. Orders for dynamite, fuse, and caps not infrequently remain unfilled for six to eight months.

## SITUATION IN THE SUBPROVINCE OF KALINGA.

Rapid progress has been made in the subprovince of Kalinga during the year. Under the direction of Lieutenant-Governor Walter F. Hale the main trail north was completed to the Apayao border with the exception of work on three rock bluffs which was nearly completed. That portion of the main line south between Lubuagan and Bañgad was widened and is now in excellent condition.

The most noteworthy event of the year was the securing of some 300 firearms. The fact that these firearms were in the hands of the Kalingas had long been well known. It would have been possible to take many of them by force, but Lieutenant-Governor Hale believed that with patience the people could be persuaded voluntarily to give them up, and it seemed to me best to give him a free hand in the matter. He secured the voluntary surrender of some 250 firearms; the rest were finally taken by force.

The people of one small group of settlements had long openly defied him. More than a year ago when he attempted to visit them they threw lances at him. He gathered up the lances and

returned them with a polite intimation that such action on their part was discourteous and that he wanted to make friends with them. He was assured that they would not be his friends, but on the contrary desired to fight him. Indeed he was informed that they would take his head at the first opportunity! For nearly a year he patiently tried to establish friendly relations with them, utilizing as go-betweens certain of the inhabitants of friendly neighboring towns. His efforts were, however, entirely fruitless, and in the end four of the hostile settlements "broke their peace" with neighboring settlements of their own people and started on the warpath, thus making summary measures imperatively necessary. Lieutenant-Governor Hale, assisted by a strong detachment of Philippine Constabulary under command of Captain Harris, and by a number of his own headmen among the Kalingas, visited the offending settlements and severely punished them. "Houses" (the people of this particular region live in mere shacks of little value) were burned, pigs were killed, and other damage was inflicted. Four of the people of the settlements were killed, but in fair fights which they themselves started. A number of firearms were taken. The expedition ended upon the arrival of an unexpected and undesired contingent of Kalinga reinforcements. It was feared that these people, who were anxious to aid Lieutenant-Governor Hale, and were probably at the same time not averse to taking a stray head or to plundering their enemies, might prove difficult to control, and they were accordingly accompanied to their homes.

This expedition accomplished the desired result. Participation in it by a considerable force of friendly Kalingas, who obeyed orders and refrained from improper conduct, was a noteworthy event.

The leading men of the offending settlements promptly got in touch with Lieutenant-Governor Hale, and on my annual visit to Lubuagan I had the pleasure of conferring with them at that place to which they had come voluntarily. The vigorous and effective action taken in this case renders the necessity for similar action in Kalinga in the future improbable.

#### THE SITUATION IN THE SUBPROVINCES OF AMBURAYAN, LEPANTO AND BENGUET.

The Igorots of the subprovinces of Amburayan, Lepanto, and Benguet are, with few exceptions, peaceful agriculturists, and the very worst of them seldom get beyond cattle stealing. Disturbances of public order among the Igorots in these subprovinces are practically unknown. Road and trail work have pro-

gressed steadily during the year and the results have been very satisfactory, especially in Lepanto where a new low-grade trail has been built from the top of the divide at Loo to Mancayan. It will soon reach Cervantes. The provincial buildings and grounds at Cervantes have been greatly improved and conditions at that place have so changed for the better that I have promised the people to recommend its restoration to the status of a township if I find on my next annual inspection trip that they have continued to improve. Because of the unsatisfactory attitude of the people of this place, who were, with few exceptions, Filipinos, its township government was temporarily taken away and it was given instead the form of government of a *rancheria*, or settlement of wild people, and was thus brought under the immediate control of the subprovincial authorities.

In Benguet the so-called "mountain trail" affords a line of communication with the north country which is not subject to interruption by flood, as only one small river is crossed within the limits of the subprovince. This trail proves easier to maintain than was anticipated. Portions of it must ultimately be widened, but much of it is already of cart-road width. It runs at a height of 5,000 to 7,000 feet above sea level. Comfortable five-room rest houses have been erected along it at intervals of 30 kilometers. It passes through tropical vegetation of unsurpassed beauty, commands magnificent mountain views, and should in the near future become a route much traveled by tourists.

#### THE SITUATION IN PALAWAN.

The most important event which has occurred during the year in Palawan is the transfer to the southeast coast of all the Moros who previously inhabited the southwest coast and its adjacent small islands. This latter region, on account of its inaccessibility, had become a place of refuge for evildoers among the Moros of the southern Philippines and of north Borneo, and its lawless population was steadily increasing. A Moro who is good according to the standards of his own tribe is a sufficiently difficult person to deal with, and one who is a criminal when judged by these standards is about as bad a man as can be found in the Philippines. The Moro settlements on the west coast were, for the most part, in very inaccessible places, approach to them being almost necessarily made by boat through mangrove and nipa swamps which afforded every opportunity for ambush and the delivery of a short range fire which could not be effectively returned. Firearms and ammunition were smuggled in some quantity from Borneo.

Under existing provisions of law, the governor of any special Government province may, with the approval of the Secretary of the Interior, require members of non-Christian tribes to take up their residences at a place or places indicated by him if such a course is deemed to be in the interest of public order. The desirability of ordering the Moros of the west coast to take up their abodes in readily accessible places on the east coast had long been apparent, but it was deemed best to await some occurrence which would render the justice of such a course entirely evident to the Moros themselves. Such an occurrence took place when an unprovoked attack was made on the party of the Secretary of the Interior at Culasian Bay during August, 1910, and when Dato Tumay, whose people made this attack, refused to come in and explain their conduct after being ordered to do so. The transfer of all Moros to the east coast was then ordered and the order was carried into effect. The people were furnished government transportation for themselves and their effects, and were rendered all possible assistance in the establishment of their new villages. They were furthermore provided with food until able to look after themselves, and the opportunity to work at good wages was given to everyone willing to avail himself of it. This undertaking succeeded beyond all expectation, and the success attained is due in a very large measure to the cordial and effective coöperation of Major J. P. Harbeson and of the officers and men of the Philippine Scouts serving under his command in the Province of Palawan. Major Harbeson not only minimized the danger of bloodshed by placing at the disposal of the province a force strong enough to make it apparent to everyone that resistance would be fruitless, but rendered invaluable assistance with the transportation at his disposal, while the admirable discipline and high efficiency displayed by the officers and men under his command greatly expedited the work, and at the same time very materially aided in the establishment and maintenance of friendly relations with the people thus necessarily subjected to measures which were sufficiently distasteful to them without being made unnecessarily harsh. The effect on public order in Palawan produced by the transfer of the west-coast Moros has been very marked. Murder and robbery have already become rare in their new territory and many of them are now performing the first hard and honest labor of their lives. It is apparently safe to go through their country unarmed. No effort has been spared to bring home to them the fact that the measures adopted in this case were not inspired by any feeling of hostility



toward them personally, and that when Moros demonstrate their willingness to become law-abiding citizens the Government is willing and anxious to aid them in every possible legitimate way.

The prosecution of public works in Palawan has been greatly hampered during the year by lack of funds. Nevertheless, material progress has been made in trail construction and in the improvement of telephonic communication.

Mr. Olney Bondurant, assistant to the provincial governor for work among the Moros, was called to the United States by illness and death in his family and has not yet returned. His place has been very acceptably filled by Lieut C. M. Spears, who had become thoroughly familiar with the Moro problem in Palawan during the transfer of the Moros from the west coast, in which movement he rendered valuable assistance, and whose knowledge of native dialects has been of great help.

#### THE SITUATION IN MINDORO.

In the province of Mindoro a special effort to put the Filipino towns in a satisfactory sanitary condition has long been in progress. A large measure of success has been attained. I believe that there is no regularly organized province which has towns as clean and sanitary on the average as are the towns of Mindoro to-day.

Work among the Mangyans has not progressed as rapidly as I had hoped and expected. Prior to my departure for the United States I gave Governor Louis J. Van Schaick explicit instructions relative to this work. Personal reasons made him desire to visit the United States, and, although his claim for leave privileges was less strong than that of most other officers of special government provinces, he took leave without beginning the work which I had outlined for him. His temporary successor, the provincial secretary, made no effort to perform this work. Mr. Chas. W. Franks, who soon replaced the provincial secretary as acting governor, promptly took it up and began active preliminary exploration.

Governor Van Schaick returned to the Philippines after a very brief stay in the United States. Shortly after his arrival he began explorations in the Mangyan country, which necessarily terminated with the on-coming of the rainy season. Any one familiar with climatic conditions in Mindoro will realize that this result was inevitable. A year has thus been well-nigh frittered away so far as concerns work for the wild people of Mindoro, and no substantial new result has been obtained save the gathering of a limited amount of information

of permanent value. The continuance of such conditions during the coming year cannot be tolerated.

Considerable progress has been made with road and trail work and the extension of telephone lines between the several towns on Mindoro Island. The condition of public order during the year has left little to be desired.

#### THE SITUATION IN THE PROVINCE OF AGUSAN.

Governor Frederick Johnson, who had served continuously in the Philippines for many years without leave, to the serious detriment of his health, went on leave in April; and his active career has since been terminated by the amputation of a leg injured during an expedition against the Manobos at the time of the murder of Mr. Ickis.

He had served as governor of the Province of Agusan since its establishment, and had labored hard and unremittingly to promote its interests, especially during the early constructive period when the absence of proper means of transportation on the Agusan River and its tributaries rendered it necessary for him to live in native dugout canoes for weeks at a time. His place has been temporarily filled by Lieut. Col. John R. White of the Philippine Constabulary, and the work in the subprovince of Butuan, where the governor of Agusan resides, has suffered no interruption. During the year the condition of the provincial capital has been enormously improved and it now bids fair soon to become a model town. Road work has progressed, though somewhat slowly. A channel has been opened through the swamps between Clavijo and Viruela, thus opening the upper Agusan River to launch navigation. The channel between Viruela and Bunauan has been materially improved. The series of Manobo stores has been extended. New stores have been opened in Talacogon and in Butuan.

#### THE SITUATION IN THE SUBPROVINCE OF BUKIDNON.

Greater progress than ever before was made with road, trail, and bridge work in this subprovince. With one insignificant exception, every stream between the coast and Malaybalay is now bridged. Many miles of trail have been broadened to cart-road width. Several of the grades leading into the river canyons have been materially improved. A substantial residence has been built at Malaybalay for the lieutenant-governor at a cost of but ₱2,000. The little towns of this subprovince continue to be models of cleanliness and good sanitation. A number of new ones have been established and the old ones steadily grow as

people who have heretofore lived in the hills are attracted to them. The experiment of furnishing a few disc plows and draft cattle so that the people may be able to break the heavy sod of the fields near their towns and cultivate the underlying rich soil has proved so successful that additional plows and animals will be provided.

#### THE AGUSAN-MORO PROVINCE BOUNDARY DIFFICULTY.

In the absence of any artificial monuments or any objects which could well serve as a basis for a boundary line, the eighth parallel of latitude was selected by the Philippine Commission as the boundary between the Province of Agusan on the one hand and the districts of Davao and Cotabato of the Moro Province on the other. The exact position of this parallel had never been determined and some uncertainty naturally existed as to its location on the ground. However, no trouble resulted until a subordinate officer of the Moro Province wrote a somewhat intemperate letter to Governor Jonhson of Agusan, claiming jurisdiction over territory since shown to lie well within the limits of the Province of Agusan. Upon learning this fact I directed Governor Johnson and Lieutenant-Governor Lewis, in the event of any future dispute with Moro Province officials relative to boundary matters, quietly to withdraw from the territory claimed by the Moro Province and to report the facts to me in order that I might take the matter up through the Governor-General with the governor of the Moro Province. This seemed to me a wiser course than for subordinates to quarrel over matters which they were powerless to settle.

I had for some time suspected that the Mailag Valley, which had been administered as part of the subprovince of Bukidnon, lay south of the eighth parallel, but as it was distant but three hours ride from the capital of Bukidnon, and was cut off by tractless forests and unnavigable streams from all communication with the Moro Province, the Bukidnon officials had, with my approval, assumed control over it and had exercised such control to the very great advantage of its people. I had expressed to the governor of the Moro Province my belief that this territory theoretically lay within his jurisdiction, but I had not understood that any effort would be made to occupy it pending the prospective adjustment of all boundary questions between the two provinces, which had been provisionally arranged for. In August, 1910, a party from the Moro Province came into Bukidnon over the main trail from the coast and then divided, part of its members returning by the route followed in entering the subprovince, and

the remainder going west to the Molita River and southwest on or in the vicinity of this stream to its point of union with the Pulangui River, and then descending the Pulangui to Cotabato. The head of this party was Major Heiberg, governor of the neighboring Cotabato district of the Moro Province, and one of its members was Captain Signor, U. S. Navy, who brought with him proper instruments and proceeded to locate the eighth parallel and to announce the result of his observations which showed, as had been anticipated, that most of the Mailag Valley lay within the Moro Province.

I have since been informed by the governor of the Moro Province that this trip was strictly *unofficial* and that Captain Signor was not even requested by him to locate the eighth parallel. No advance information as to its objects, or that it was unofficial in character, or, indeed, that it was to be made at all, was given to the officials of the Province of Agusan or to the Secretary of the Interior, and Lieutenant-Governor Lewis was, therefore, without instructions in the premises. However, as he had received specific instructions from me temporarily quietly to vacate any territory which might be claimed by the Moro Province, and as the Mailag Valley had been shown to be within that province, by a supposedly official expedition sent out by it, he immediately withdrew his authority from it, at the same time informing the visiting officials of the Moro Province that he was doing so, and communicating with me both by cable and by letter. It had been our intention to settle the whole question of the Agusan-Moro Province boundary at one time rather than to take it up piecemeal. The same mail that brought Lieutenant-Governor Lewis' letter brought also a letter from the governor of the Moro Province requesting me to allow boundary matters in the Agusan River Valley to remain *in statu quo* until he himself could visit the disputed territory. This I gladly agreed to do, putting Lieutenant-Governor Lewis' communication in an office file with all other papers pertaining to the Agusan-Moro Province boundary. Before the Governor of the Moro Province visited the Agusan River Valley, which indeed he has not yet done, I was called to the United States, and it did not occur to me prior to my departure to bring this matter, to which I attached little importance, to the attention of the Governor-General. The papers connected with it were retained in my office.

A considerable period elapsed before the Moro Province asserted its authority in the Mailag Valley. Meanwhile a robbery was committed at the town of Mailag, and later the Barton hacienda was raided by Manobos, with some of whom its owner

was on bad terms. The occupants of the place were badly frightened and property to the value of ₱400 or ₱500 was stolen. On the afternoon of the day of the raid the raiders were attacked just as they were departing by a detachment of Philippine Constabulary from Malaybalay, aided by Señor Manuel Fortich, assistant to the provincial governor, and by his servant and the presidente of Malaybalay. Some 12 of them were killed and others wounded.

CRIMINAL CASES BROUGHT AGAINST LIEUTENANT-GOVERNOR LEWIS  
AND ASSISTANT, MANUEL FORTICH.

Meanwhile, as might have been anticipated in view of the attitude of the neighboring province of Misamis, which was fully set forth in my last annual report, a heavy fire had been opened during my absence on Lieutenant-Governor Lewis and assistant Manuel Fortich by certain of the Misamis people, aided by an ex-constabulary officer whose resignation had been accepted for cause. Mr. Eugene Barton, the owner of the Barton hacienda, had taken an active part in the hostile machinations, and Messrs. Barton and Griffiths had openly boasted that they would drive both Mr. Lewis and Señor Fortich out of the subprovince, and that if they did not "get" them on one charge they would on another.

On December 5, 1910, the Governor-General directed Mr. Lewis to resume authority over the Mailag Valley. This order reached Mr. Lewis on the 6th and was made known to Mr. Barton and others on the same day. The following morning they left for the coast. On arrival there Mr. Barton forwarded to the Governor-General a letter dated December 12, 1910, embodying numerous serious charges against Mr. Lewis, and when, on December 13, 1910, that official reached Cagayan de Misamis on his way to inaugurate road work in the western part of Bukidnon he was arrested by two Filipino policemen on two criminal charges, to wit, *estafa* and the falsification of a public document. A determined effort was made to prevent his getting bail so that he might be thrown into jail, but it failed. Immediately thereafter, on December 15, followed an order for the arrest without warrant of Señor Fortich for *murder*, it being alleged that he had ordered the killing of wounded Manobos at the time of the Barton raid. When these several cases came up in court they collapsed miserably. The case against Señor Fortich was withdrawn at the request of the man primarily responsible for bringing it, and the cases against Lieutenant-Governor Lewis were withdrawn on recommendation of a lawyer

from the Attorney-General's office at Manila who was especially assigned by the Governor-General to investigate the matter. He found that they were spite cases brought by a private prosecutor.

There is not a shadow of evidence to show that Señor Fortich ordered the killing of any wounded Manobo, and it is my opinion that instead of being prosecuted for murder he should have been praised for the courage and energy he displayed on the day of the Barton raid. Had it not been for him it is probable that the raiders would have escaped unpunished; and had his suggestion as to the guarding of a ford that they would necessarily utilize on their retreat been acted upon, it is probable that all, or nearly all, of them would have been killed or captured. It has been charged that Lieutenant-Governor Lewis renounced authority over the Mailag Valley out of hostility toward the Bartons, who were actively seeking to bring about his removal and with whose rough treatment of the wild people he had interfered. The charge is preposterous. Mr. Lewis abandoned with regret this territory in which he had worked hard. He abandoned it pursuant to his correct interpretation of general instructions given him by me. I alone am responsible for the action which he took and for its result. Had the unofficial character of the expedition from the Moro Province been made known to me, all subsequent embarrassment would have been avoided.

It may be mentioned in passing that Captain Signor, who started back for the coast the day after locating the eighth parallel near Mailag, also subsequently located the intersection of the eighth parallel with the Agusan River in the subprovince of Butuan. In this case, too, I have been informed by the governor of the Moro Province that his action was unofficial and was not requested. However, the Moro Province has officially, and very properly, occupied the territory up to the boundary thus unofficially established.

#### RECOMMENDATIONS RELATIVE TO THE BOUNDARY BETWEEN THE MORO PROVINCE AND THE PROVINCE OF AGUSAN.

I have the honor to make the following recommendations covering the whole subject of the boundary between the Moro Province and the Province of Agusan:

1. The detached portion of the territory of Bukidnon in western Misamis is desired by the Moro Province. It is contiguous to territory belonging to the Dapitan district of that province which is inhabited by non-Christians of the Bukidnon tribe. It is completely detached from the remaining territory of the subprovince of Bukidnon. I am of the opinion that in the interest

of effective and economical administration it should be transferred bodily to the Moro Province.

2. It is conceded by all concerned that the Mailag Valley on the upper water shed of the Pulangui River can not be advantageously administered as a part of the Moro Province, but should form a part of the subprovince of Bukidnon. Just where the new boundary should run is a question of some difficulty. It had been practically agreed that the south boundary of the subprovince of Bukidnon should be the water shed of the Pulangui River down to and including the Kulaman River, the Pulangui River itself, thence to its point of union with the Molita River, and the Molita River, thence to its source, unless it should prove that there are a considerable number of Moros in the territory between the Molita River and the Pulangui River, but I am at this writing (August 29) just in receipt of a suggestion from the governor of the Moro Province that, as the Pulangui River is navigable for launches up to the point of union with the Molita River, and as both it and the Molita River are navigable for native boats for considerable distances above this point, the territory between the Pulangui and the Molita Rivers and a straight line joining the head of navigation of the Molita and the falls of the Pulangui should be allowed to remain in the Moro Province as it is accessible by water to officials of that province and can, therefore, be more easily reached by them for purposes of administration than by the officials of Bukidnon. Furthermore its satisfactory administration by the officials of the latter subprovince would involve much preliminary road and trail construction. I am of the opinion that this argument is sound, and recommend that the suggestion of the governor of the Moro Province be favorably acted upon, except as to the point of intersection of the line from the head of navigation of the Molita with the Pulangui, which in my opinion should be the point of union of the Kulaman and the Pulangui.

The present boundary between the subprovince of Butuan and the Moro Province is the eighth parallel of north latitude, which cuts off practically all the territory inhabited by Mandayas, and ends the administrative jurisdiction of the authorities of the Province of Agusan at a point where the largest river in the Philippines is navigable at all times for launches. In fact, the Agusan River can be ascended in light draft launches throughout practically the entire year up to Compostela, and it and its branches are available for navigation by native boats for a considerable additional distance. The character of the Mandayas makes the maintenance of a garrison among them desirable and communication can be established with their ter-

ritory from the Moro side only after the construction of many miles of road and trail through a difficult country. The situation, in other words, is precisely that which exists in the territory above referred to between the Molita and Pulangui rivers, except that in this latter case the line of water communication reaches the sea through the territory of the Province of Agusan, and the cost of road and trail construction would fall upon the Moro Province. In each case the water route will inevitably be the trade route. In each case also the country can be most readily reached for administrative purposes by water. At the present time school supplies are being sent to the Mandaya country through Butuan, and subsistence supplies are being purchased there from the Manobo stores. The subprovince of Butuan is equipped with water transportation, and I recommend that the territory in question be added to it for the same reason assigned by the governor of the Moro Province for leaving the territory between the Molita and Pulangui rivers in the Moro Province, which reason I consider valid in each case.

However, in view of the important part which the personal equation demonstrably plays in the control of non-Christian tribes I recommend that the transfer be not actually consummated prior to the time when it may be necessary or desirable to appoint a successor to Lieutenant Gillmore, who is at present administering the affairs of the Mandayas. The proper time for the transfer will, in my opinion, arrive when Lieutenant Gillmore's tour of duty in the Mandaya country ends.

#### WORK FOR NON-CHRISTIAN TRIBES IN THE REGULARLY ORGANIZED PROVINCES.

In my last annual report I fully discussed the status of this work. During this year there has been no substantial change in the situation then described. The officials of the few regularly organized provinces which had previously interested themselves in bettering the condition of their non-Christian inhabitants have continued to do so. The apathy displayed by the officials of the remaining provinces containing non-Christian inhabitants continues.

#### THE BUREAU OF HEALTH.

##### GENERAL HEALTH CONDITIONS.

General health conditions throughout the year have been unprecedentedly good and are now better than at any time since the American occupation. The number of cases of cholera has been comparatively unimportant. The Islands have continued



free from bubonic plague, one case, arriving on an incoming vessel from Amoy, having died in quarantine at Mariveles. Smallpox steadily decreases. Leprosy is now rare outside the Culion colony.

Eight thousand two hundred and seventy-nine deaths occurred in Manila during the year, of which 3,779 were without medical attendance. Although this may seem an astonishing condition of affairs, it is a comparatively short time since 50 per cent or more of the deaths were without medical attendance. The ignorance and superstition of the common people in health matters are gradually being overcome. Free dispensaries, free medical service, and free obstetrical service for the poor are beginning to play an important part in improving health conditions at Manila; and, together with the free surgical clinics at the Philippine General Hospital, bring good medical and surgical attention within the reach of all. Eight municipal physicians are employed to render gratuitous assistance to the poor. They are men of high character who take a deep interest in their work. During the year 7,768 patients were visited by them and they wrote 31,780 prescriptions. At each station of the Bureau of Health there are one or more midwives to attend confinement cases among the poor; and in the effort to lessen infant mortality the Philippine Medical School conducts an important free obstetrical service, in connection with which Filipina trained nurses are sent out to instruct mothers in the care of their babes.

#### SIMPLE REMEDY PACKAGES.

In view of the fact that many municipalities throughout the Islands were entirely without medicines, the Bureau of Health has provided packages of simple remedies, together with a small pamphlet in English, Spanish, and the more important native dialects giving information as to their use. This effort to have at least the more isolated municipalities provided with a few important simple remedies is meeting with some success, the number of packages sold being 226 as against 92 for the previous year. Medicines for use among the people have been furnished gratuitously to missionaries and others who are in a position to employ them intelligently. Very large quantities of some of the safer and more useful drugs, such as quinine, have been given away. Every municipality in the Islands ought to be kept constantly supplied with disinfectants in order that dangerous communicable diseases may be attacked immediately upon their appearance. Emergency disinfecting packages, designed to meet this

end, have been prepared by the Bureau of Health. They cost but ₱10 with one disinfecting pump, or ₱16 with two, yet only 14 were purchased during the year.

#### SURGICAL RELIEF FOR THE POOR.

A systematic effort has been inaugurated to ascertain the whereabouts of persons suffering from chronic curable surgical ailments, such as tumors, clubbed hands and feet, hare lip, cleft palate, goiter, squint, hernia, incipient cancer, tuberculosis of bones and joints, obstructive blindness, and other operably relievable maladies. District health officers have been instructed carefully to prepare lists of such persons within their several districts in order that, when opportunity offers, they may be given the benefit of the admirable free clinic at the Philippine General Hospital. As a majority of afflicted persons in the provinces are too poor to pay the cost of a trip to Manila from their homes, I took up with the Insular Auditor the question of the availability of the Bureau of Health contingent funds for this purpose. He finally ruled that such expenditures would not be questioned if approved in each individual case by the Secretary of the Interior. Under the existing arrangements, indigent persons before being brought in are carefully examined by competent surgeons to the end that needless expense may not be imposed on the Government, and that false hopes of cure may not be aroused only to be dashed. In view of the attitude of many of the more ignorant inhabitants toward surgical work, it was highly important at the outset to limit the Government free work to cases which offered reasonable hope of recovery and relief. I have caused it to be known that, subject to the above limitations, I will approve every request which I receive for the allowance of transportation expenses until available funds are exhausted. It should be understood that there is no specific appropriation made for this purpose, and that I can authorize the use of such funds only as may be saved by economy in other expenditures; but an immense amount of good has already been accomplished, especially in the relief of eye troubles, and I am of the opinion that the Legislature could not do better than to make specific appropriation of a considerable sum to be used in bringing worthy cases to the hospital, in paying the actual cost of their maintenance there, and in returning them to their homes. Each person thus relieved is sure to be a real missionary, and in my opinion there is no equally effective way to disseminate among the Filipinos knowledge of the possibilities of modern medicine and surgery.

As an illustration of the practical working of this policy,

I will cite a specific case. Mention has already been made of the fact that Ehrlich's "606" is a specific for yaws. A Bontoc Igorot suffering from this disease was found at Barlig where live some of the wildest people of the northern Luzon mountains. An effort was made to persuade him to go to the little temporary hospital at Bontoc, which he was unwilling to do. He was in the end practically compelled to go, and having received the one injection necessary for a cure, and being left without further medication during three or four days, he complained bitterly that *no medicine was being put on his sores*. Then the marvelous effect of the drug began to manifest itself. In a few more days he was allowed to leave the hospital for brief intervals and went around the town excitedly demonstrating his improved condition to all who would look. Suddenly he disappeared, to the great disappointment of the physician in charge, who had hoped to use him as an object lesson in convincing others of the efficacy of the drug. To the amazement of everyone, he reappeared a few days later with 13 persons, victims of yaws, from his town, whom he himself had persuaded to come to the hospital and had brought in on foot a distance of some 50 miles.

#### FREE TREATMENT FOR RABIES.

A free Pasteur institute has been established in connection with the Bureau of Science. In cases where persons bitten by mad dogs can not be brought to Manila, the material for treatment, with simple, clear instructions for its use during each of the twenty-five days over which the treatment extends, is sent out to the provinces to be administered by the nearest available physician.

#### RECOMMENDATIONS RELATIVE TO THE ESTEROS AND UNDRAINED LANDS OF MANILA.

Through the establishment of a new water system and of a modern sewer system and the installation of the pail conservancy system in many of the outlying and hitherto insanitary districts, health conditions in Manila have been enormously improved. The most serious obstacle which must now be overcome in putting the city into a thoroughly sanitary condition is that afforded by the existence of a number of filthy *esteros*, or tidal creeks, and of extensive areas of low-lying, undrainable land, some considerable portion of which is at present thickly settled. The ownership of the *esteros* has been determined to be vested in the city of Manila and the responsibility for their improvement has thus been fixed. The committee

which took up this matter has made various recommendations, of which I will quote the following:

That there are barrios which are so insanitary as to make it unadvisable that they should continue to be occupied for residential purposes until they are drained or filled in, which embrace about 6,900,000 square meters, all of which is below the elevation of 11.50, city datum; that the filling necessary to raise these to elevation 11.50 is about 4,500,000 cubic meters; and that all low lands in the city should be filled in before any of the foreshore or beach is reclaimed.

That streets and alleys be cut through the congested and insanitary areas and that new sanitary areas be provided for nipa shack dwellers at such places as they can be made sanitary.

For years the Director of Health and the Secretary of the Interior have urged the opening of streets and alleys through these congested and insanitary areas. It was obvious that while they might be temporarily disinfected as an emergency measure, they could not be kept sanitary until streets were opened along which vehicles for the removal of night soil and garbage might pass, while the recurring expense involved in disinfecting country literally by the square mile, which we were compelled to do during cholera epidemics, was very great. In my opinion no two better recommendations intimately concerning public health conditions in Manila have ever been made, and I trust that active steps will at once be taken to carry them into effect.

#### THE ELIMINATION OF BERIBERI.

In my last annual report I called attention to the executive order of the Governor-General, issued upon recommendation of the Director of Health and the Secretary of the Interior, forbidding the use of polished rice in Government institutions because of the demonstrated relationship between a diet too largely composed of such rice and the prevalence of beriberi. The result of this order has been all that could be hoped for. Beriberi has been eradicated from Bilibid Prison, Iwahig Penal Colony, Culion Leper Colony, San Lazaro Hospital, and the tuberculosis camps of the Bureau of Health, and is to-day non-existent in Government institutions.

#### PHILIPPINE ISLANDS ANTITUBERCULOSIS SOCIETY.

This Society was organized in Manila July 29, 1910. Its object is clearly indicated by its name. Its establishment meant the inauguration of a popular movement for the combating of tuberculosis in the Philippines. Much has already been accomplished. The society has taken over the San Juan Tuberculosis Sanitarium and has established five free dispensaries

in Manila. It has carried on a large amount of most valuable publicity work which will have the effect of enlightening the ignorant as to the practical methods of curing the victims of tuberculosis and of preventing the spread of infection. Branches of the society have been established at Iloilo, Cebu, Dumaguete, and Zamboanga. Although the movement is, and should remain, a popular one, the Bureau of Health has rendered all possible assistance, supplying free of charge furniture and medicines for the sanitarium and free dispensaries, and aiding in other ways with its personnel, its equipment, and its funds.

#### IMPROVED AMBULANCE SERVICE.

The electric ambulances of the Bureau of Health have proved economical and highly satisfactory. They have greatly facilitated the prompt and comfortable transfer of the sick and the injured to hospitals. The ambulance attendants, who are all Filipinos, are rendering very satisfactory and efficient services. The present number of ambulances is insufficient to meet the increased demand resulting from the establishment of the General Hospital and will soon be increased.

#### CEMETERY REGULATIONS.

The new regulations for placing and maintaining cemeteries in a proper sanitary condition, which were adopted after full and careful consideration of the interests of all concerned, have operated very successfully and with practically no friction.

#### PHILIPPINE TRAINING SCHOOL FOR NURSES.

The training of young Filipina women as nurses has been steadily prosecuted with uninterrupted success. The authorized number of such nurses has been increased by providing for the appointment of a total of four female student nurses annually from Agusan, Nueva Vizcaya, the Mountain Province, and the Moro Province. Thus far efforts to train young men as nurses have resulted less satisfactorily. However, they have been of much shorter duration. The pupils in attendance at the school during the past year numbered 107, of whom 38 were males and 69 females. They made an especially satisfactory record at the time of the great disaster resulting from the eruption of Taal Volcano, when a large number of dreadfully burned people were brought to the hospital, necessitating the hasty equipment of new wards and the doubling of the hours of work of the nurses. The heavy extra work involved was borne without a murmur, and indeed many of the nurses asked to be assigned to still longer hours.

RELIEF IN THE FIELD OF PERSONS INJURED BY THE ERUPTION  
OF TAAL VOLCANO.

After several days of premonitory disturbance there occurred a terrific explosion in the crater of Taal Volcano on the night of January 30, 1911. At the outset the appalling magnitude of the resulting calamity was not realized. This was largely due to the fact that in the area affected by the ejecta the destruction was either so slight as to be almost negligible, or so complete as practically to leave no one to tell the tale. Whole villages were absolutely and almost instantaneously wiped out of existence. The peculiar nature of the resulting conditions will be realized when I state that the ratio of the number injured to the number killed outright was approximately as 1 to 14.

In the reports of physicians, nurses, and others the injured or wounded are constantly referred to as "seriously burned," but after careful investigation I am convinced that in a large number of cases they were not really burned. The final terrific explosion had been preceded during a considerable period by the almost continuous discharge of steam and mud from the crater, and at an interval of about sixty minutes by a very heavy explosion which had still further loaded the air above the crater with those heavy materials. Against this great mass of air thus burdened an enormous volume of matter thrown heavenward by the final outburst impinged, and the inertia of the overlying mass was such as to spread the force of the final explosion downward and outward. A blast of air and gases of terrific violence radiated on all sides from the volcano, as is shown by the direction taken by trees and saplings which were broken short off and driven before it, and by the slant of the more flexible bamboos and giant tropical grasses which it bent but did not break. The bark on the volcano side of stumps of trees was in some cases obliterated and in others cut as fine as tow, *but showed not the slightest sign of carbonization*, and while the exposed portions of the bodies of the victims seemed to be horribly burned, the thinnest clothing, even when semitransparent, sufficed to protect the flesh underneath and was not itself burned. It therefore seems evident that these injuries were really produced by a violent current of air and gases charged with minute volcanic ejecta, the whole acting like a sand blast.

In some cases the positions of the bodies of the dead indicated that they had been quickly and painlessly suffocated by noxious gases; and in a few isolated cases all of the occupants

of a single room or of a single house were killed in such a manner as to suggest the theory of local explosions of gases from the volcano, ignited by the flames of lamps or fires.

On January 31, as soon as it became known that there were injured persons to care for, Medical Inspector Schapiro and Assistant Inspectors Tago and Marques were rushed to the scene of the disaster with a large supply of surgical dressings and supplies. Shortly afterwards Medical Inspector Snodgrass was sent to Indang, Cavite, with dressings and supplies. He brought back 18 patients to the Philippine General Hospital and then returned to the stricken district. Temporary hospitals were established in Taal, San Nicolas, Pansipit, and Bayuyungan, and patients were also cared for in the military hospital at Batangas and by the bishop of Lipa.

The force of the explosion was such as to cause a wave to radiate outward from the volcano on the waters of Bombon Lake which surrounds it, and this wave also created havoc and loss of life in villages on low ground along the lake shore.

#### CHOLERA.

During the year there were a total of 6,649 known cases of cholera as against 9,957 for the year 1909-10, and 20,223 for the year 1908-9. No case was reported between March 9, 1911, and the end of the year.

#### ANTISMALLPOX VACCINATION.

Vaccination against smallpox has been actively pushed, the total recorded vaccinations during the year numbering 1,167,984. The civilized population is now well protected against smallpox and a beginning has been made in vaccinating the people of the wild hill tribes. As a result smallpox has ceased to be a very important factor in the Philippine death rate.

#### COÖPERATION BETWEEN THE MUNICIPAL BOARD AND THE HEALTH AUTHORITIES IN THE IMPROVEMENT OF SANITARY CONDITIONS IN MANILA.

In some previous reports I have with regret deemed it necessary to criticize the attitude of the municipal board of the city of Manila, and more especially that of the city engineer, toward fundamentally necessary sanitary public improvements. It gives me special pleasure to state that the conditions complained of terminated with the appointment of Mr. C. W. Hubbell as city engineer. Mr. William H. Robinson, the present city engineer, has actively seconded all efforts tending to the betterment of

sanitary conditions in Manila. This, together with the assistance given by the municipal board in the all-important matter of the establishment of thoroughly sanitary barrios or wards, to which the poor inhabitants of low-lying infected lands could be transferred, has combined to render possible comparatively rapid improvement in sanitary conditions.

#### UNSATISFACTORY SANITARY CONDITIONS AT THE CULION LEPER COLONY.

On inspecting Culion Leper Colony in July, 1911, I found to my very great surprise that sanitary conditions there were far from satisfactory. This state of things at the outset seemed to me unpardonable, but further investigation revealed the existence of an anomalous and perplexing situation. The work of cleaning this leper town would presumably involve serious danger to nonleprous persons who undertook it. At all events it would be impossible to find any considerable number of such persons who would be *willing* to undertake it. Many of the lepers themselves are in a physical condition which unfits them for work of any sort. It is an unfortunate fact that many of those who were hungry and half naked prior to their transfer to the colony, and the number of such persons is very large, have been somewhat spoiled by the comforts and ease of their life at Culion, and having made up their minds that the Government owes, and will give, them a living, are indisposed to perform work of any sort, even if physically entirely fit to do so. I was met by urgent demands from lepers to be *paid* for this, that, or the other little service which they had rendered. I informed them that they would be adequately paid for all work performed by them for the colony except that necessary to keep it in a proper condition of cleanliness, and to maintain its streets and walks, but that those who were able-bodied would be required to attend to these matters free of charge. This involved only two days' work per month on the part of each able-bodied resident. The lepers cheerfully agreed to this arrangement at the time, but later when it came to doing the work, most of them were missing and the willing few attempted to perform duties which should have been distributed among many. These facts came out at a subsequent visit to the colony, when I found conditions greatly improved but still unsatisfactory, and was informed that of 40 to 60 people listed to work on a given day not more than 6 to 20 would report for duty. The idlers felt comparatively secure, as they were already in effect under confinement and well knew that we would not resort to any violent form of punishment in dealing with them. Under these circum-



stances, I called a meeting of those concerned and informed them that in future the roll of those detailed for keeping the colony clean would be called at a fixed hour daily, and the leper police would look up absentees; that any absentee physically unfit to work would be excused, but that those perfectly able to work and not reporting for duty would be transferred to a suitable inclosure, where they would be furnished with an abundance of water, but would be left without other subsistence until such time as they were willing to perform the light duties required of them. They seemed to take good naturedly the fact that they had finally been outwitted, and it is not anticipated that there will be any further trouble on this score. It should be possible to make the Culion Leper Colony a beautiful place and it is hoped that the colonists will soon begin to take a personal interest in bringing about this result.

#### ATTITUDE OF THE PUBLIC TOWARD SANITARY WORK.

There has been noteworthy improvement during the year in the attitude of the Filipino public toward sanitary work both in Manila and in the provinces, and the vicious effort of a portion of the public press to misrepresent the purposes of the Bureau of Health and the methods employed by it in attaining them, and to alarm and prejudice the ignorant and the superstitious, which so long continued, has been conspicuously absent. The beneficent work of the Philippine General Hospital for the poor is beginning to exert a far-reaching influence in convincing the common people that the hospital is a place in which to get well rather than a place in which to die. The training for the Government service of a large number of Filipina and Filipino nurses, and the employment of the really well-trained young Filipino physicians and surgeons who are now being educated in this country, are helping to convince the people that there does not exist among the officers who control the public-health service the slightest prejudice against the Filipino as such, but that on the contrary we are only too glad to secure the services of competent Filipino men and women.

The policy imposed on officers and employees of the Bureau of Health in dealing with the public is set forth in the following extract from its manual:

In dealing with the officials and with the people, regardless of their station in life, all employees of the Bureau of Health are enjoined by this office to exercise tact, perseverance, courtesy, and good nature so as to command their friendship and respect. Energy and earnestness of purpose are powerful factors in the promotion of confidence, while idleness and indifference bring about distrust and opposition, hence employees of the

Bureau of Health are expected to be energetic and alert and to exercise initiative ability in planning their work. If this is done the cause of sanitation in the Philippine Islands will go forward to success and discord and discontent will give way to confidence and coöperation.

#### HOSPITAL.

The Philippine General Hospital was formally opened on September 1, 1910, during the visit of the Secretary of War. The following day there were transferred to it the patients from the Civil Hospital, and this latter institution which had performed a great work, although handicapped by utterly inadequate quarters, passed into history. The General Hospital has an administration building, a surgical pavilion, a kitchen building, and five ward pavilions, all connected by broad corridors which, like the buildings themselves, are of reinforced concrete. The detached buildings are a nurses' home, a dispensary and outclinic building, and a garage for the electric ambulances. The detached buildings were not completed when the hospital was opened, and there was not available equipment sufficient to prepare all of the wards for occupancy at once. These are now fully equipped and *full* of patients. Indeed, one ward intended to accommodate 60 patients has had as many as 80. It is, unfortunately, now necessary to utilize all of one ward and half of another in providing quarters for male nurses and other employees. This situation should be remedied as soon as possible, as the ward space is badly needed by the sick, for whom it was intended.

Further details as to health conditions, and as to the work of the Bureau of Health, will be found in the annual report of its Acting Director (Exhibit D).

The completion of a service building, now nearly finished, will relieve it to a large degree.

#### QUARANTINE SERVICE.

The work of the United States Public Health and Marine-Hospital Service in the Philippines has been performed with its usual efficiency throughout the year. Bubonic plague has been very prevalent in neighboring countries and it has been necessary to impose a seven-day quarantine on passengers and crews of vessels from Amoy, Saigon, and Phnom Penh, and on steerage passengers from Hongkong. Shortly after quarantine was declared against Amoy a case of plague occurred on a vessel from that port. It was landed and cared for at Mariveles and there was no extension of the disease.

Extreme precautions have been taken to prevent the introduction of plague by rats. Not only have vessels been required to

lie clear of piers and to use rat funnels on all mooring ropes, but a vigorous campaign has been waged against shore rats living in the vicinity of all piers at which ocean going vessels tie up. Situated as we are within three or four days' voyage of numerous ports which are more or less constantly plague infected, it is remarkable that we have been able to keep the disease out so long, but every reasonable precaution will be taken to keep up the very satisfactory record thus far made.

#### IMMIGRANTS.

The examination of prospective immigrants by officers of the United States Public Health and Marine-Hospital Service at several ports prior to their departure for the Philippines, and the care now taken by steamship companies to exclude persons likely to be ordered deported on account of their physical condition, are continuing to produce marked improvement in the physical condition of arriving immigrants. Of the 3,001 examined during the year, admission was denied to but 33 in all, of whom 22 were turned back at Manila and 11 at Iloilo, trachoma being the cause in every instance.

There have been no unusual events in connection with the quarantine work to call for special comment. Full details in regard to it will be found in the annual report of the chief quarantine officer for the Philippine Islands (Exhibit E).

#### THE BUREAU OF FORESTRY.

##### ADMINISTRATION OF SPECIAL FORESTS.

Exceptional interest attaches to the administration of the Bataan and the Northern Negros forests for the reason that, sometime since, the working force of the Bureau of Forestry was somewhat increased in order to enable the Director to carry out plans proposed by him for the betterment of conditions in these forests, including the more satisfactory control of lumbering operations, and the checking of the widely spread practice of making unauthorized *cañingins*, or forest clearings, with the resulting needless destruction of valuable timber.

##### THE BATAAN FOREST.

There are some 73,000 hectares of public forest land in the Province of Bataan. A special service for this tract was organized late in the year 1909. Some time was necessarily consumed in effecting the needed organization and in opening trails so as to make the work of employees effective. The Director of

Forestry states that the proper dues are now collected on practically all timber cut in this forest, whereas formerly timber in considerable quantity escaped the payment of dues. The unlawful making of *caiñgins* has been almost entirely stopped, and authorized *caiñgins* have been largely restricted to land which had formerly been cleared, is now covered with second growth, and lies outside of the lines which have been established for the proposed permanent forest.

Many ignorant persons holding forest licenses have been materially assisted in the proper preparation of their invoices and other papers. It is probable that a considerable amount of firewood cut for sale in the Bataan Forest still escapes the payment of Government charges. This is a matter of minor importance. The really important thing is that this great forest situated directly across the bay from Manila should be so administered as to render it permanently productive, instead of allowing the continuance of practices which would rapidly destroy it. It is believed that it is now being protected with a reasonable degree of effectiveness, although more men are needed than can at present be employed, and there is further need of repairs to the patrol trails in the eastern part of the province and the construction of a new and similar western patrol trail which should run, like the eastern one, on the approximate line between land which may profitably be cleared and used for agricultural purposes and land which should be permanently kept in forest.

As a result of the combined efforts of the governor of Bataan and employees of the Bureau of Forestry, a considerable number of homestead applications have been filed within the past year. The importance of persuading people to settle down permanently, and properly to improve fixed tracts of lands, is, of course, self-evident, as is the desirability of persuading them to become the owners of their holdings.

#### THE NORTHERN NEGROS FOREST.

The Northern Negros Forest includes an immense body of very valuable timber lying in the northern half of the island of Negros. Within its limits there are two large tracts covered by the twenty-year-exclusive licenses of the Insular Lumber Company and the Negros-Philippine Lumber Company, respectively. The comparatively rich and thickly settled coastal plain of Occidental Negros depends upon this forest for construction timber, and, to a large extent, for fuel. Prior to the organization of a reasonably adequate system of supervision, indiscriminate cutting

had caused great havoc in many parts of this forest, the damage done being so great as to necessitate close restriction of cutting in certain districts, and its entire prohibition in others, for a number of years.

As the result of the establishment of a special service for this forest the operations of the large licensees are now being closely supervised, and experience has shown that there was decided need of such supervision. Special attention has been given to the problem of securing adequate reproduction in areas already partially cleared. Land which is now being logged over will be kept in permanent forest until the great body of unimproved open land lying between the forest line and the coast is occupied and cultivated to a very much larger extent than at present.

The Director of the Bureau of Forestry reports that the employees of the licensees operating in this forest are working in coöperation with forest officers to prevent useless waste of timber and the destruction of young growth, and that the improvement in the condition of the logged areas brought about during the past year is especially noticeable. Government charges have been collected on merchantable logs abandoned in the forest, which tends to discourage such wasteful neglect. Probably fraudulent claims of private ownership to extensive forest tracts have been, and are being, investigated, and the making of unauthorized *cañingins* has been largely checked. The opening up of additional patrol trails in the near future is highly desirable.

#### THE ARAYAT FOREST.

Mount Arayat is an isolated extinct volcanic peak rising from the great level plain which forms so large a part of the Provinces of Bulacan, Pampanga, Nueva Ecija, and Tarlac. A considerable part of this plain has long been under cultivation, and the ruthlessly destructive methods formerly followed have effectively wiped out most of the commercial forests with which its uncultivated portions were doubtlessly formerly covered. Mount Arayat is forested from base to summit, and while the timber growing on it is neither very dense nor very desirable as compared with that growing in the more valuable forests of the Islands, its unique situation in the center of a rich agricultural, deforested plain renders its proper conservation and development extremely important.

The more accessible portions of this forest on the lower slopes of the mountain have already suffered severely from overcutting, and the issuance of cutting licenses for wood other

than match wood has been suspended during the year. In the near future it is proposed to divide the entire area into "communal forests," one of which will be assigned to each of the neighboring towns. It is believed that the towns will then appreciate to a much greater extent than at present the importance of properly caring for their forest tracts, and that they will be on the alert to prevent depredations on them by people of other towns.

#### THE MAQUILING FOREST.

This forest includes some 5,500 hectares of public forest lands on, and in the immediate vicinity of Mount Maquiling in the Provinces of La Laguna and Batangas. It is practically surrounded by valuable agricultural lands, a considerable part of which are under cultivation. Not only does it furnish lumber and fuel to the large population in its vicinity, but it provides a practice area for the students of the Government Forest School located at its base. All the public forest lands of this forest have recently been declared a forest reserve by proclamation of the Governor-General. The work of the Bureau of Forestry in this reserve has been largely confined to the prevention of illegal cutting and of unlawful *cañingins*, and to the investigation of titles to parcels of land which are privately claimed. Owners of bona fide claims are being given all reasonable assistance in securing title, but a determined effort will be made to prevent the securing of private title to lands unlawfully claimed.

#### SPECIAL COÖPERATIVE WORK.

Two special pieces of coöperative work, of benefit both to the Government and to private individuals, have been carried out during the year, the persons benefitted having undertaken to reimburse the Bureau of Forestry for all expenses incurred, including the salaries of forest officers detailed. The first project was a forest study of the Valle del Sabani Hacienda in Nueva Ecija, including the making of a detailed estimate of the various kinds of commercial timber on the tract, recommendations for logging the area and for utilizing the timber, and a topographical map showing the land divided into commercial and noncommercial forests, cultivated areas, grass land, etc., together with full recommendations as to irrigation and transportation. This work, which resulted satisfactorily to all concerned, was performed by a Filipino forester educated in the United States.

The second coöperative project consisted in the making of

a map and an estimate showing the location and amount of match wood in five municipalities of La Laguna province with a view to the issuance of an exclusive license for the cutting of this match wood and the making of adequate provisions for a new crop by planting, which is entirely feasible as Philippine match woods are quick-growing.

#### THE FOREST SCHOOL.

The Forest School began its second year on June 12, 1911. There have been created 35 scholarships, one for each province organized under the Provincial Government Act, and one for each of the special Government provinces of Palawan, Mindoro, and Batanes. Similar provisions should be made at once for Nueva Vizcaya, Agusan, the Mountain Province, and the Moro Province, and the undersigned will submit to the Commission in the near future the necessary Act.

Each scholarship entitles the holder to reimbursement for his traveling expenses from his home to Los Baños, where the Forest School is located, to free living quarters, free tuition, and to a monthly cash allowance of ₱25. Most of the required text-books are also furnished free of charge. The total present enrollment of the school is 46, there being 15 *pensionados* in the senior class, 29 in the junior class, and 2 private students.

The Forest School is conducted as a part of the College of Agriculture of the University of the Philippines. The full course covers a period of four years, the first two of which are occupied by work identical with that performed by students in agriculture. The teaching force in the technical courses in forestry is supplied by the detail of foresters from the Bureau. Under the arrangement entered into, the obligation to employ *pensionados* who graduate from this school rests upon the Government, and adequate provisions should be made for the employment of 15 of these young men who will graduate on March 15, 1912. The Director of Forestry recommends that they be appointed "probationary rangers" with a minimum salary of ₱60 per month. They will require some ₱40 per month for living and traveling expenses while in the field. After six months of probationary work, graduates who have not rendered satisfactory service should be dropped, and those who have given satisfaction should be appointed rangers with an initial salary of ₱70 per month. It is believed that this school will serve a very useful purpose in training up competent Filipino employees for the Forestry Service, a consummation greatly to be desired, both on account of the increased economy which

should result and because of the increased stability which the service will possess when its officers and employees can be selected to a much greater extent than at present from among the permanent residents of this country. I strongly recommend that adequate provision be made in the coming appropriation bill for the support of this school and for the employment by the Government of competent students and graduates from it.

#### FOREST MUSEUM AND FOREST EXHIBITS.

A good museum collection of logs and planks of Philippine timber has been installed in the museum building on Calle Anloague and it is being added to as opportunity offers. Planks are finished in their natural colors without artificial fillers or stains, and each specimen bears a label giving practical information as to strength, durability, supply and prices of the wood which it represents. This collection has already proven of great value in interesting visitors from other countries in Philippine hard woods.

During the year the Bureau has made forestry exhibits at the Philippine Carnival, at the Provincial Exposition of Western Negros, at the Fair of the Moro Province, and at Singapore.

A so-called "traveling exhibit" comprising 6-foot planks of the principal commercial species polished to show natural grain and color, specimens of the more important minor forest products, and collections of forest maps, and of figures and statistics has been prepared with a view to its use at provincial fairs and expositions.

#### FOREST NURSERIES.

The Bureau has maintained four nurseries during the year as follows: One in the Bataan Forest at Limay, one in the Northern Negros Forest at Fabrica, one on the grounds of the forest school at Los Baños, and one at Baguio. In the latter nursery are grown many species of forest trees from other countries in order to ascertain whether the climate and soil of Baguio are suited to them. There are also grown ornamental plants in considerable number and variety for sale to the residents of Baguio who desire them for the beautification of their grounds.

#### PUBLIC LAND REPORTS.

One thousand eight hundred and twenty-nine parcels of land were inspected during the year, of which 1,608 were found to be more suitable for agricultural than for forest purposes. There are still pending 1,551 applications for land which persons desire to homestead, lease, or purchase.



## CAIÑGINS.

I have already referred to the success of the efforts to prevent the making of unauthorized *caiñgins* in the four special forests. The Director of Forestry further reports that in North and South Ilocos, the Cagayan Valley, Masbate, Ambos Camarines, and Cebu, regions which are relatively frequently visited by forest officers, there has been a marked decrease in the number of illegal *caiñgins*, but that in many other provinces extensive destruction of valuable timber has occurred.

It is unfortunately often true that the ignorant *tao* who actually makes and plants the clearing is not primarily responsible for the violation of law involved, having been egged on by some rich land owner who furnished him the seed for his crop. Under such an arrangement the poor *tao* runs all the risk, does all the work, and even then gives half of his crop to the *cacique*, while the latter annexes the *caiñgin* to the land which he claims to own.

## THE FREE USE PRIVILEGE.

The Director of Forestry continues to mourn over the extension to residents of the privilege of obtaining from the public forests without charge timber for their personal use. He states that nearly 1,000 gratuitous licenses for first group woods were granted during the year, which he says means a loss in revenue of at least ₱25,000, and will, in the end, deprive certain regions of all their merchantable first-group timber. He further states, that as much of the timber is desired for house posts, a great number of undersized trees are cut, while persons who have large trees cut and sawn into boards could in nearly all cases afford to pay the low forest charges. He further states that rare and valuable first-group trees are used for purposes for which more abundant lower-group timbers would give just as satisfactory service, and that while the law permits the free use of first-group timber there is no inducement to economy and a great deal of unnecessary waste occurs. While I may be in error, I do not concur fully in the views of the Director of Forestry on this subject. It seems to me that it is quite as well that merchantable timber should be utilized by the person cutting it for the construction of a good durable house for his family as that it should be sold with the not remote possibility that the profits of such sale will be frittered away, and I believe that the loss of ₱25,000 of revenue is a matter of insignificant importance compared with the beneficial results coming from

the construction of homes in which the owners can take justifiable pride. As to the tax-paying ability of persons who can afford to bring in large trees, it is the custom in such provinces as Nueva Vizcaya for a poor family first to erect, some distance back of the highway, a small shack of light materials which will ultimately serve as a kitchen, but temporarily answers for a dwelling; then to construct in front of it, little by little, the hardwood frame for a good house, closing the house in at the outset with light materials, and gradually replacing these with hardwood boards, a single large log of hardwood being kept under the house so that its inhabitants may work away at sawing boards whenever opportunity offers. The tax-paying power of such people is usually small, and their industry, perseverance, and foresight are, in my opinion, worthy of encouragement.

#### COMMUNAL FORESTS.

Communal forests have now been established for 68 towns, and 40 others have applied for them. In my opinion, their request should be granted at the earliest practicable time, as the establishment of such forests tends to minimize the troubles arising from the free use privilege of which the Director of Forestry complains. Obviously where the residents of a town can cut their free timber in one area only, they are likely to be more careful about cutting undersized timber and about utilizing what they do cut than if they have free access to every conveniently situated tract of Government forest.

#### SPECIAL WORK IN THE MORO PROVINCE.

Although funds for the carrying on of forestry work available during the fiscal year just closed were very inadequate, I informed the Commission at the time appropriations were made that I should reestablish in the Moro Province the forest service which was discontinued there at the time the appropriations and the personnel of the Bureau of Forestry were cut down in 1905, even if this course involved the abandonment of much needed work elsewhere in the Archipelago, as the very great importance of the forest wealth of Mindanao, Basilan, and Tawi-Tawi, and the extent of commercial operations already inaugurated there seemed to me to demand such a course. I carried out this plan, and am of the opinion that the wisdom of expending in the Moro Province the sum necessary to perform this work has been abundantly demonstrated by the increased revenue obtained, as well as by the enforcement of proper cutting regula-

tions throughout areas where commercial operations are being conducted upon a considerable scale.

Fifty-seven ordinary timber licenses and eleven gratuitous licenses were issued in the province during the year. Two hundred and twenty-two thousand kilos of almaciga (gum damar) and 70,000 kilos of gutta-percha were exported. Forest charges on almaciga were reduced from ₱1.50 to ₱1 per 100 kilos, and those on lumbang nuts were abolished. The price of gutta-percha has declined materially and exports of it have correspondingly declined. These factors have all tended to reduce the total revenue. The Director of Forestry is of the opinion that the establishment in the Moro Province of a special forest service such as exists in the Bataan and Northern Negros forests would increase the total revenue obtained there at least 25 per cent.

#### FOREST MUSEUM AT ZAMBOANGA.

Through the public spirit of the local lumbermen who donated to the Bureau of Forestry their exhibits at the Zamboanga Fair, it has been possible to start a forest museum at Zamboanga which has been installed partly in the office of the forester in charge and partly in two adjoining rooms made available by the provincial authorities. This exhibit, which will be of especial interest and value to persons investigating the possibilities of the lumber business in Mindanao, already needs considerably more space than is available.

#### RUBBER PLANTING IN THE MORO PROVINCE.

Two companies have begun rubber planting on a considerable scale. The planting of Ceara rubber has been given up, for, although the trees grow very rapidly, their sweet roots are subject to attack by deer and wild hogs which eat them and by white ants which bore into and destroy them. Only Para rubber is now being put out.

#### INTEREST OF THE MORO PROVINCE IN THE FOREST SERVICE.

The establishment of a more adequate forest service was earnestly requested by the authorities of the Moro Province. They have rendered the employees conducting it every possible assistance throughout the year.

#### NEED OF A PUBLICITY CAMPAIGN.

I heartily concur in what the Director of Forestry has said in his annual report relative to the need of giving greater publicity in the United States to the opportunities offered by

lumbering in the Philippine Islands, and wish to incorporate in my report his statements on this subject which follow:

The need for the continuation of an energetic propaganda in the United States to show the opportunities offered by lumbering in the Philippines has been shown repeatedly and strongly during the past year. The demand for Philippine lumber has always exceeded the amount manufactured, but at present the disproportion is probably greater than ever before. There is, of course, no question about the amount of standing timber available for exploitation, timber of such kinds and so situated that it can be logged with a substantial profit. Only a very small fraction of the commercial forests of the Islands have been touched. The policy of the Government toward the lumbermen is an exceptionally liberal one. The forest charges are half, or less than half, those for similar classes of timber in neighboring tropical countries. An indication of the financial stability of most lumber companies in the Islands is shown by their policy of using their earnings to extend their operations and increase their equipment and capacity. Yet the local demand alone is in excess of the amount of lumber manufactured and timber users find it difficult to fill their needs even at the prevailing high prices. For a time it appeared that the Government would find it impossible to obtain locally the timber needed for the construction of the schoolhouses authorized by the last session of the Legislature and serious consideration was given to importing Oregon pine and California redwood to supply local needs. Fortunately such an anomalous situation was averted through the joint action of a committee appointed for the purpose by the Governor-General and the newly formed Philippine Lumber Manufacturers' Association. The shipment of Philippine lumber to the United States, although small at present, could be made at once to assume large proportions if the capacity of the local mills were increased to provide a sufficient surplus over local demands. China presents an almost inexhaustible field for the cheaper grades of lumber not suitable for export to the United States or Europe.

Excellent situations are available for long-term exclusive licenses. The one thing needed is capital and this can be induced to come in only by persistently spreading a knowledge of the local situation and opportunities among possible investors. The principal methods of the Bureau in its propaganda work consist in the preparation and wide distribution of bulletins, circulars, and leaflets advertising the forest resources of the Philippines and the opportunities in exploiting them; articles in magazines of general circulation and lumber trade journals; correspondence; and the distribution of wood samples.

During the past year there was issued as Bulletin No. 10 of this Bureau a work entitled "The Forests of the Philippines," which contains by far the most complete information yet collected on the subject. It is divided into two parts, published separately. Part I is given up to a discussion of forest types and products, containing a full discussion of the relation of the Government toward the licensees who exploit the public forests; and Part II contains a detailed description of the principal forest trees with short references to a great number of species of secondary or slight present importance. Both parts are fully illustrated.

Much interest has been attracted to the forest of the Islands by a

leaflet issued by the Bureau entitled "Manila, the Future Distributing Center for the Far East." It is attached to this report as an appendix.

The distribution of so-called hand specimens of Philippine woods has been greatly extended during the past year and the usefulness of each specimen has been decidedly increased by attaching a label giving in a concise form the most important information concerning the species, such as its structural qualities, durability, supply, customary sizes, principal uses, etc. Partly with the idea of preventing such samples being requested by those who have no real interest in Philippine woods but who yield to the opportunity of getting something for nothing, and partly to help meet the expenses of preparation and so permit the Bureau to extend the work, a price of 20 centavos has been fixed for each specimen of most of the species; and in the case of a comparatively few species which either are very rare or whose extreme hardness or toughness of grain makes their preparation a slow and expensive process, the price has been fixed at 40 centavos. A leaflet advertising the possibility of obtaining such specimens was prepared and given wide distribution principally through newspapers and trade journals, and the demands for them continue to come in. Two thousand eight hundred and ninety-seven such specimens were distributed during the year and several large additional orders are now being filled.

If the necessary funds are available during the present fiscal year it is desired to install small forest exhibits in suitable locations in the principal lumber centers of the United States, more especially in Chicago, Minneapolis, Seattle, and San Francisco. Such an exhibit would consist of about 30 6-foot polished planks of the principal commercial species of the Islands, a collection of rattans, almaciga, gutta-percha, tan bark and other minor forest products, together with forest maps, statistics, and literature. Arrangements have also been made with some of the principal lumber journals for a series of articles on Philippine trees and forests. The vacation trips of foresters of the Bureau to the United States are used to provide an opportunity for the giving of lectures and for consultation with possible investors.

#### TWENTY-YEAR-EXCLUSIVE LICENSES IN BENGUET.

Owing to the absence of white ants and other timber destroying pests, pine lumber grown in Benguet, which would be of little or no value for construction purposes in the lowlands, is available for use in the regions where it is produced. The development of Baguio as the summer capital of the Philippines has been handicapped from the outset by the insufficiency of the lumber supply, which has not increased as rapidly as has the demand. One twenty-year-exclusive license has been issued and one is about to be issued. Each covers one of the few large forest tracts within reasonable distance of Baguio. In view of all these facts, it was deemed necessary to exercise special care in preparing these license agreements, each of which calls for a minimum annual cut of 4,000 cubic meters, *at least half of which shall be available for purchase by the residents of*

*Baguio at a price which shall not exceed ₱70 per 1,000 feet, board measure, at the lumber yard, or ₱75 per 1,000 feet delivered at any point within 2½ kilometers of Government Center.*

This provision will materially reduce the cost price of lumber at Baguio, and will, it is believed, adequately protect the public.

#### OTHER EXCLUSIVE LICENSE AGREEMENTS.

A twenty-year-exclusive license agreement has been entered into with the Rio Grande Rubber Estates (Limited). It concedes the privilege of collecting rubber, gutta-percha, and other gums and resins for a period of twenty years on the watershed of the Cabagan River in the Cotabato Valley. The company is required, among other things, to furnish a capital of ₱100,000 for the prosecution of the work; to plant 100 hectares in rubber and gutta-percha with at least 400 rubber and gutta-percha trees to the hectare during each of the ten years following the first planting provided for in the agreement, at least 10 per cent of such trees to be gutta-percha; and to keep at least 400 living trees of rubber and gutta-percha on each hectare planted. The interests of native collectors of forest products are protected by a provision binding the licensees to pay them for all forest products gathered at the prices which may be current at the local markets or Moro exchanges in the valley.

A five-year-exclusive license for the privilege of cutting firewood in the mangrove swamps on Fort Barrera Bay, Masbate, has been granted to the Colorado Mining Company.

#### RESTRICTIONS ON EXPORTATION OF LUMBER FROM CERTAIN PROVINCES.

It has been found advisable, in certain regions, to refuse licenses for the cutting of timber intended to be exported from the province or island where it is grown owing to the relationship between supply and demand in the regions in question.

#### NECESSITY FOR AN INCREASED APPROPRIATION FOR THE BUREAU OF FORESTRY.

I feel that I have been conservative, probably *too* conservative, in my requests for appropriations for the Bureau of Forestry since the amount authorized to be expended by this Bureau was cut down in 1905. It has seemed to me wise to let the work justify itself. I think it has done so.

While it is idle to talk of the value of timber, on forest lands which are at present entirely inaccessible, as if it were an immediately available asset, and while it is equally idle to talk

about the total value of the forest products of the Philippines as if it were a known sum and were not of necessity based on guesses as to the area of forest lands and the value per acre of forest products, it is a hard fact that the forests of the Philippine Islands are of very great potential value, and that this value will steadily increase as improved means of transportation render them more accessible, and as the depletion of the forests of other countries causes prices to rise. Under proper supervision forest tracts can be cut over and their value in many instances actually increased by the removal of full-grown trees and of trees of more or less useless species, which gives light and air to young trees of the more valuable kinds.

We should indeed be false to our trust to the Filipino people if we allowed the reckless cutting methods and *cañgin* making which have until recently prevailed to continue, while the operations of large corporations might, if uncontrolled, add seriously to the total damage.

There are some 16,000,000 hectares of public forests, and the stand of merchantable timber has been roughly estimated at 200,000,000,000 board feet. The value of forest products now utilized annually is approximately ₱5,000,000. The appropriation for the Bureau of Forestry during the year was ₱149,000. The force authorized and available for looking after the public forests consists of 10 American foresters, 2 wood experts, 1 forest nurseryman, 1 topographer, 4 Filipino assistant foresters, 11 Filipino head rangers, 13 Filipino rangers and assistant rangers, 1 Filipino draftsman, 4 American and 10 Filipino clerks, and 1 messenger. Not only is this force very inadequate to do the work which ought to be performed, but the appropriation is inadequate to keep even this force at work throughout the year.

I do not allow Bureau chiefs to incur deficits in order to perform work needing to be done in spite of the fact that there is no appropriation to cover the cost; and when it became necessary practically to suspend field work three months before the close of the fiscal year in order to get through the year on the funds available, I ordered the work suspended. This involved the loss of that quarter of the year best suited for carrying on forest work in most portions of the Islands and the discharge of temporary employees who had gained a considerable amount of experience; tended to disorganize the service by keeping a considerable number of high-salaried employees comparatively inactive on account of lack of funds to pay their traveling expenses; caused loss of revenue to the Government; and resulted

in much preventable destruction of valuable timber by the making of *cañingins*, which would have been avoided had it been possible to keep the force of the Bureau in the field.

It does not seem to me that there is anything in the present financial condition of this Government to justify such manifestly false economy, especially in view of the fact that the small increases in the force of the Bureau of Forestry authorized within the past few years have in each case been quite promptly followed by increases in forest revenues which have usually been a good deal more than sufficient to defray the increased cost of the Bureau.

The lumber business of the Philippines is growing and it is likely to grow more rapidly as time goes by. It is not good business policy to make no corresponding increase in the funds expended to develop this industry, and in safeguarding the public forests. The revenue collected on forest products is the best index we have as to the growth of the lumber industry, and I recommend that a reasonable fixed percentage of this revenue be set aside by law for the support of the Bureau of Forestry.

Very much more detailed statements relative to the work of this Bureau and its needs will be found in the annual report of its Director (Exhibit F).

#### BUREAU OF SCIENCE.

##### BUILDINGS.

The new wing of the Bureau of Science building is approaching completion. It will provide adequate quarters for the division of mines, the section of fisheries, the entomological collections and laboratories, the ornithological collections and work rooms, and the library, thus affording proper space for collections and for work not before adequately provided for, and making it possible to vacate a considerable number of rooms originally planned and furnished for the performance of laboratory work in chemistry, bacteriology and pathology, but subsequently used for work of a very different character. The fisheries room will contain tables for eight workers and will be equipped with five experimental aquaria, and with hatching jars, museum cases, and net lockers. In connection with the great public aquarium soon to be opened, it will afford excellent facilities for the study of fishes and marine invertebrates, in which the waters of the Philippines abound to an extent hardly equaled in any other country.

The necessity for the construction of this wing was foreseen



at the time the original building was erected and the plan then adopted contemplated it.

It is greatly to be regretted that the main laboratory building was not constructed out of reinforced concrete as is the new wing. Should it be possible in the not very distant future to construct the remaining wing originally planned for, and provide accommodations in it for the Bureau of Forestry and the Bureau of Health, we should then have the Bureau of Science, the Bureau of Forestry, and the Bureau of Health adequately housed on the same piece of ground with the Philippine General Hospital and the College of Medicine and Surgery. The quarters of the Philippine Weather Bureau are now on an adjacent lot, so that this arrangement would bring in close proximity to each other the offices of all the Bureaus of the Government performing strictly scientific work, with the exception of the Bureau of Agriculture. The advantages of such an arrangement are obvious.

#### ONE NEW BUILDING NEEDED AT ONCE.

There is immediate need of a building to accommodate the machinery for the testing of cement, concrete, road materials, rope, wire, steel, cloth, etc. This machinery is at present crowded into all sorts of out of the way places, some of it being even placed under the eaves of outhouses. It has been impracticable to transfer and get under cover the large testing machine at present located at Bilibid Prison, and the constant sending of employees across the city to use this machine is a nuisance.

#### THE NEW AQUARIUM.

By executive action of the Governor-General, ₱40,000 were made available for expenditure by the Bureau of Science to defray the cost of constructing an aquarium on the bastion immediately in front of the Real gate in the city wall of old Manila. This aquarium will soon be completed. It is equipped with 26 tanks of ordinary size and with 1 large tank and 3 ponds, the latter to serve for very large fish and water inhabiting animals. With the inexhaustible riches of the Philippine seas upon which to draw, this aquarium should be second to none in the beauty and variety of marine forms displayed.

Information as to the best means for, and methods of, taking, transferring, and feeding fish must be gained by experience to some considerable extent, although every effort has been made to learn as much as possible in advance from the experience of others. Unfortunately, the water of Manila Bay is not clean

enough to be used directly. Clear sea water must, therefore, be brought from a distance, and filtered and aerated as required. A pumping and filtering system adequate for this purpose has been installed.

#### ILOILO SUGAR LABORATORY.

At the close of the last previous fiscal year this laboratory had done practically no polarization work and its abolition was suggested. I declined to approve this recommendation, and gave instructions that the laboratory should be kept open and that the officer in charge, in the absence of opportunity to do polarization work, should go into the field and devote himself to chemical and other work more likely to be of practical value to the sugar planters of Panay and Negros. The wisdom of this decision was vindicated with unexpected promptness. More than 2,000 polarizations were performed between December 13 and July 31, and a large amount of other work of great practical value to sugar growers was done. Various commercial houses at Iloilo have expressed in writing their satisfaction with the work of this laboratory and their appreciation of the action of the Government in establishing and maintaining it. There seems to be no room for doubt that the work at Iloilo will rapidly increase. As soon as practicable the working force of the laboratory should be correspondingly increased and it should be provided with permanent quarters.

#### REORGANIZATION OF THE BOTANICAL WORK.

Up to the present time the botanical work of the Bureau has been largely confined to the collection, identification, and preservation of plant and tree specimens. It was obviously necessary at the outset to find out what plant life the Islands contained. This work has now advanced so far that it is both possible and desirable to leave its prosecution in the hands of Mr. Elmer D. Merrill, who is to-day the greatest living authority on the systematic botany of the Philippines, and to replace two other systematic botanists with a plant pathologist and a plant physiologist, a broad foundation for practical work along these lines having now been laid.

#### AID FOR WORK ON TROPICAL SUNLIGHT RECEIVED FROM PRIVATE SOURCES.

In view of the claims which have been made relative to the effect of tropical sunlight on the white races and especially on blonds, it seems desirable, if possible, to replace more or less extravagant theories with scientifically determined facts. The

subject of the effect of tropical sunlight on man, animals and plants is at present attracting a good deal of attention, and is obviously of great importance to a country like the Philippines. Its proper investigation here made necessary the procuring of an expensive spectrograph which had not been contemplated when the appropriations for the Bureau were made. Mr. Enrique Zobel, Mr. Antonio Roxas, Mr. Manuel Earnshaw, Dr. Ariston Bautista y Lim, the San Miguel Brewery, and the Germinal Tobacco Factory contributed the necessary funds. The thanks of this Department for their public-spirited action are due, and are extended, to them. Important and interesting results have already been obtained and others are to be anticipated.

#### REPUBLISHING OF BUREAU OF SCIENCE PUBLICATIONS.

There is a continued demand for some of the publications of the Bureau of Science which are now out of print, while the available copies of others are nearly exhausted and the call for them seems to increase as the supply diminishes. As these publications are sold at a price sufficient to cover their cost, it would seem that they should be reprinted, and I recommend the establishment of a small reimbursable fund, of, say, ₱5,000, for this purpose.

#### PARTICIPATION OF THE DIRECTOR OF THE BIOLOGICAL LABORATORY IN THE INTERNATIONAL PLAGUE CONFERENCE.

Dr. Richard P. Strong, director of the biological laboratory, was, upon my recommendation, appointed American delegate to the International Plague Conference in China. He was compelled to leave for Manchuria on very short notice, but it proved practicable to equip him with a practically complete laboratory outfit for plague work and with a fairly good working library within two days. He took with him as assistant Doctor Teague. They were the first men on the ground; were able to secure permission for the performing of autopsies, which in itself was an unprecedented thing, and began laboratory work at once. The pneumonic form of plague, with which they were dealing, may be air borne as the result of the ejection of minute globules of sputum by coughing patients, and is highly contagious. It is difficult to conceive of a less enviable task than the obtaining of material from living and dead victims of this disease, which is invariably fatal, and the performance of laboratory work on this material when obtained. Doctors Strong and Teague were able to contribute a large amount of first-hand information at the conference, and to add very materially to the sum total

of human knowledge relative to pneumonic plague, as well as to demonstrate most conclusively the fact that it is possible to avoid contagion by the scrupulous carrying out of the necessary preventative measures, even if brought in very close contact with its victims.

The report of the work of this conference, which will naturally attract the attention of medical men the world over, is to be printed by the Bureau of Printing at Manila and edited by Doctor Strong.

#### THE RELATIONSHIP BETWEEN THE BUREAU OF SCIENCE AND THE UNIVERSITY OF THE PHILIPPINES.

Within a comparatively short time there has been established the Kaiser Wilhelm Institute for the prosecution of original scientific research. It was founded by His Imperial Majesty the German Emperor, who believed that professors and docents in the German universities were having their time so increasingly occupied with the details of instruction, as the result of a constant growth in the number of students, that research work, which has assisted so greatly in the development of the resources of the German Empire, was suffering and was in danger of suffering still more. It was the opinion of His Majesty that this condition could be remedied by the establishment of independent institutions for investigation which should be in close touch with universities and polytechnic schools, and should afford to the members of their faculties opportunity to perform original scientific work. It is interesting to note that one of the existing great institutions for scientific research referred to by persons whose duty it was to make known His Majesty's views on this subject was the Philippine Bureau of Science. The truth is, however, that we are here now called upon to face the danger of a process the reverse of that which is going on in the German Empire. We have entered actively upon the important work of establishing a university. In selecting members for the scientific faculty of this institution it is quite natural that those in authority should seek to obtain the services of men on the ground who have demonstrated their ability to perform valuable work, have become acclimated, and have gained a familiarity with conditions which greatly increases the value of their services and can be had only as the result of long experience.

The Philippine Bureau of Science was established and developed in the face of bitter opposition, and had to justify, and indeed sometimes to fight for, its existence. The salaries paid at the outset were, in many instances, pitifully small. It has

been, on the whole, extraordinarily fortunate in the character of its employees, the results of whose scientific investigations are to-day known throughout the civilized world, but the obtaining of such employees at such salaries has involved an amount of personal attention on the part of the Secretary of the Interior, the Director of the Bureau of Science, and the chief of the Bureau of Insular Affairs which has not been necessary in connection with the working force of any other Bureau of the Insular Government. Success has been attained in many instances in spite of, rather than as the result of, the salaries paid. It has to a considerable extent been due to the splendid laboratory facilities and the good library facilities which the Government has been wise enough to provide, and to the almost unexampled opportunity for the investigation of tropical problems afforded by the existence of such facilities in a country like the Philippines. In other words, we have drawn our working force from among men willing and anxious to work for the work's sake. Now, however, we are confronted by a peculiar situation. It has always been comparatively easy, and rightfully so, to secure from the Legislative body of these Islands money for educational purposes, and the salaries paid in the Philippine University are in a number of instances much higher than those paid in the Bureau of Science to men of similar experience and attainments.

I do not suggest, nor do I believe, that the salaries paid in the university are excessive, and it is only fair to say that those first paid in the Bureau of Science have in a number of instances been materially increased; but original scientific investigation is by scientists universally regarded as of more importance than the teaching of beginning students in science, and is elsewhere remunerated accordingly. The Philippines can hardly afford to be an exception to the general rule. It would be unfortunate, to say the least, if any considerable number of the trained scientific investigators employed by the Bureau of Science were at this time to transfer to the university on account of the opportunity afforded for increased compensation. On the other hand, it cannot but be humiliating to an investigator who was well trained when he came here six, eight, or ten years ago, and who after all these years has struggled up to a salary of ₱4,500, ₱5,000, or at the most ₱5,500, to see some young men fresh from the United States, with substantially the training which he himself had when he first came to the Islands, and without his own individual experience, start in as associate professor in the university at a salary of ₱6,000.

In my opinion, the rather limited number of cases of obvious injustice of this sort should be remedied by the equalization of salaries at the coming session of the Philippine Legislature. If this is not done the Bureau will inevitably lose some of its most valuable employees, and others who remain with it will be made discontented.

#### THE BIOLOGICAL LABORATORY.

The most noteworthy work done in the biological laboratory has been the discovery by its director that Ehrlich's dioxy-diamido-arsenobenzol, commonly known as "606," was an absolute specific for yaws, a disgusting, disfiguring disease which is quite prevalent in some parts of the Philippines. Three or four days after an injection of this drug the lesions begin to improve and in ten to twenty days nearly or quite disappear, leaving the skin perfectly smooth. The absorption of tumor masses measuring several centimeters in diameter and as much as a centimeter in thickness in so short a time seems almost miraculous. The drug has been used with especially gratifying results among the people of the hill tribes, whose delight at the extraordinary cures which it produces has been boundless. There have been no relapses, and "606" seems to be as effective a specific for yaws as is quinine for malaria.

#### THE NECESSITY OF FUNDS FOR THE STUDY OF ANIMAL DISEASES.

I have heretofore called attention to what is, in my opinion, the great unwisdom of failing to provide funds for the study of animal diseases, especially rinderpest, which is causing such dreadful havoc in these Islands. Funds were made available for the erection on the laboratory grounds of a stable for cattle to be used in such studies, but the *studies* have not been inaugurated on account of the lack of the necessary funds with which to prosecute them. They will necessarily be somewhat expensive because cattle must be used for experimental purposes, and a considerable number of the animals experimented upon will die; but the extent to which such expense may reasonably be expected to be off-set by actual saving can perhaps best be emphasized by one simple illustration. The Insular Government has been going to very great expense in establishing and maintaining quarantine over animals infected with rinderpest, and in providing for proper disposal of the remains of animals dying of it so as to prevent the spread of infection. It is now claimed by a very competent investigator that animals in which this disease has advanced sufficiently so that it can be recognized with cer-

tainty are absolutely incapable of communicating it, and that it can be communicated only during its very early developmental stages. Obviously, if this be true, money spent in quarantining animals in which the disease is well advanced, and in destroying the remains of animals that have died of it, is money thrown away; but obviously also, the nature of this supposed discovery is so surprising, and the consequences of assuming these statements to be true would, if they were not true, be so serious, that they should immediately be accurately and repeatedly verified, so as to avoid all possibility of mistake. A comparatively small sum would, if properly expended, settle this question beyond the peradventure of a doubt. The mere fact that doubt *exists* as the period within which animals sick with rinderpest can communicate it, shows the imperative necessity of careful study.

Rather startling claims have been made as to the uselessness of attempting to combat rinderpest in the field with the antirinderpest serum extracted by the Bureau of Science from the blood of animals immunized at the Alabang serum stable of the Bureau of Agriculture. Any unsatisfactory results in connection with a product which has been so successfully used as was this serum when employed for simultaneous inoculations by the Bureau of Science, should be made the subject of careful scientific investigation to determine their cause.

The results already obtained in the matter of finding a remedy for surra are so encouraging as to render it highly desirable that investigation of this disease, so destructive to equine animals, should continue.

#### RABIES.

Forty-eight patients bitten by supposedly rabid dogs have been given the Pasteur treatment and thus far all have remained well. Glycerinated cord was sent out for six patients, the treatment being given by local physicians. One of these, said to have received the complete treatment prior to January 26, 1911, is reported to have died on February 7 of rabies. By laboratory experiments it has been determined that glycerinated fixed rabies virus remains virulent for forty-two days in the climate of Manila.

#### A NEW PLANT DISEASE.

There has been an outbreak of a serious disease attacking Indian corn which appeared in the subprovince of Bontoc. It proves to be caused by a fungus which has apparently been recently introduced. The disease first appeared in Mexican June corn which had been brought in by the Bureau of Agriculture.

## LEGISLATION NEEDED TO PREVENT INTRODUCTION OF PLANT DISEASE.

The above fact leads me again to emphasize the necessity of legislation providing for the inspection, quarantining, and disinfection of imported plants, bulbs, cuttings, and possibly seeds. Practically every civilized country in the world now has such a law. Our staple crops, with the exception of coffee, are at present remarkably free from serious fungus diseases. The fate of the coffee industry in these Islands following close upon the heels of the introduction here of the coffee blight which originated in Ceylon and spread over the entire Eastern Hemisphere, should serve still further to emphasize the necessity of locking the stable door *before* the horse is stolen. The introduction of insect pests, such as the leaf hopper which attacks sugar cane, should also be carefully guarded against.

## MOSQUITO EXTERMINATION AT MANILA.

By coöperation between the Bureau of Science and the Director of Health an antimosquito brigade was organized with a view to an attack upon the brown mosquito, and upon the day mosquito, in Manila. This work was permanently organized in February, 1911, and has been aided by the municipal board. The brown mosquito, which was the most annoying of the local species, has been almost exterminated. The possibility that other mosquitos may become a serious nuisance has been demonstrated by the breeding of millions of small banded mosquitos in artificial pits and pools created in connection with construction work on the Luneta fill. This mosquito, like its brown relative, has distinct and peculiar habits, and with proper coöperation between the several Government entities concerned can be successfully combated.

## INCREASE OF ROUTINE LABORATORY WORK.

There has been a steady increase in the routine laboratory work performed for other bureaus of the Government and for the public. Chemical analyses, tests, and determinations have numbered 9,301 as compared with 5,168 in 1910. It is obvious that the steady growth of this work cannot continue without a corresponding increase in the working force which performs it, and it will be necessary to ask the Legislature at its coming session to authorize such increase.



## EQUIPMENT FOR TESTING ROAD MATERIALS.

During the year there has been received and installed equipment for testing road materials similar to that used by the division of roads in Washington. It is now possible to test the abrasion, cementing value, and resistance to fracture of road materials of all kinds. The importance of this work in connection with the good roads campaign in the Philippines is obvious.

## CEMENT TESTING LABORATORY.

My previous recommendations relative to the combining of the cement testing laboratories of the Government have been favorably acted upon during the year. All of this work is now performed by the Bureau of Science with economy in cost and uniformity in results.

REMISSION OF EXPORT DUTIES ON MANGANESE AND IRON ORES  
RECOMMENDED.

The Director of the Bureau of Science calls attention to the fact that manganese ore has been discovered in considerable quantities in Pangasinan and in Masbate. It at first seemed that this ore might profitably be shipped, but on further investigation it was discovered that all ores are subject to an export wharfage charge of ₱2 per ton. Estimating the value of the ore at approximately ₱13 per ton and the shipping cost to the west coast of the United States at ₱10 per ton, there would remain only ₱1 per ton for the work of mining and profits.

Iron ore occurs in considerable quantity on the small islands in Mambulao Bay. It might bring ₱4.50 in Japan. A royalty of ₱0.50 would have to be paid to the owners of the land, and deducting ₱2 for export duty there would remain only ₱2 per ton for the expense of mining and profits.

In view of the manifest importance to this country of building up the mining industry, I believe it advisable to secure legislation remitting the export duty on ores of comparatively low value.

## ENGINEERING DIVISION.

Many changes have been necessary in the work of this division owing to the completion of the buildings of the Philippine General Hospital and the College of Medicine and Surgery, all of which are supplied with light, power, steam, hot water, etc., from the engine room of the Bureau of Science. Connections

with the General Hospital buildings are maintained through a tunnel which has proved very unsatisfactory owing to the constant and rapid leakage of surface water into it. During the series of typhoons which occurred in July, 1911, the centrifugal pump ordinarily employed to keep this tunnel dry was supplemented by connecting up two other pumps in the engine room, and even then it was necessary on several occasions to call on the fire department of Manila for an engine to aid in pumping out the water which was steadily gaining and threatened to flood the tunnel and put out the lights in the General Hospital. The cost of keeping this leaky tunnel dry forms a considerable fixed charge, and it is obvious that during the coming dry season due regard for economy demands that the leakage should be stopped.

The power plant has been in operation continuously since September, 1910. The walls of the boiler furnaces are burning out, yet the boilers cannot be allowed to cool. An order for an additional boiler was placed by the Bureau of Public Works in July, 1911, and it is hoped that it will arrive and can be installed before a breakdown in the present plant occurs.

Arrangements have at last been completed for supplementing the power plant by a 67 horse power Otto producer gas plant, the engine to be direct coupled to an electric generator which will alternate with the present generator. This unit should be installed in a few months and very important experiments for determining the utility of local coal in making producer gas will then be inaugurated.

Attention is invited to the fact that the power plant of the Bureau of Science is operated entirely by Filipinos. I venture to express the opinion that no such plant in Manila is maintained in a higher state of efficiency or operated more economically. Special attention is given to the economizing of fuel and the cost of producing electrical current steadily decreases as is shown by the following table for the period since the plant has been in continuous operation:

Month.	Cost per kilowatt hour.
September .....	₱0.17670
October .....	.15270
November .....	.15138
December .....	.14689
January to June (inclusive).....	.13103.

The very comprehensive annual report of the Director of the Bureau of Science, which gives full details relative to the routine work and the various original investigations prosecuted by the Bureau, is appended hereto (Exhibit G).

## THE WEATHER BUREAU.

The work of the Philippine Weather Bureau has been maintained in its usual high state of efficiency throughout the year. It is largely routine work, of the greatest importance to commerce, but little can be said concerning it this year which has not already been said in previous reports.

## TYPHOONS.

I am glad to be able to state that the year ended June 30, 1911, was singularly free from destructive storms, the number of typhoon warnings sent out being but 94 for the entire year.

## WORK FOR IRRIGATION DIVISION.

Since October, 1910, the rainfall observations of all stations have been furnished to the irrigation division of the Bureau of Public Works within thirty days after the close of each month.

## SEISMIC DISTURBANCES.

Earthquakes have been unusually frequent and more than ordinarily severe throughout the year, those which were strong enough to be felt numbering 188, an increase of 55.4 per cent over the usual annual average. Fortunately none of them were of sufficient violence to cause serious destruction. The above figures are exclusive of the extraordinary series of earthquakes having their center in Taal Volcano which occurred between January 27 and February 25 during the destructive eruption, when no less than 1,005 distinct tremors were registered. Three or four of these were perceptible up to a distance of 300 kilometers from the epicenter, 62 up to 200 kilometers, 71 up to 100 kilometers, 151 up to 50 kilometers, and the remainder only in the immediate vicinity of the volcano, this being the first instance in which modern seismographs have chanced to be installed sufficiently near a volcano to record all the seismic disturbances during an eruption.

## IMPROVEMENTS.

Valuable improvements costing ₱2,544.07 have been made at the Manila observatory and paid for from private funds of that institution, the purchase and installation of a Wiechert seismograph being the most important item. The observatory was previously equipped with a Vicentini universal microseismograph and with an Omori horizontal pendulum seismograph, but as seven observatories in the Far East and Australia are, or are being, equipped with the Wiechert instrument it was deemed

desirable to install one in Manila. The observatory is now certainly well equipped for seismological investigations.

A strong material house has been constructed in connection with the Antipolo Magnetic Observatory at a cost of ₱6,250.

Information relative to the details of the work of the Weather Bureau and its cost will be found in the annual report of the Director (Exhibit H). This report contains a number of valuable practical suggestions for the improvement of the weather service which will form the basis of executive action on the part of the undersigned.

#### BUREAU OF LANDS.

##### FRIAR LANDS.

Of the 23 friar estates purchased by the Government 5 were offered for sale during the fiscal year 1908, 7 during the fiscal year 1909, 4 during the fiscal year 1910, and the remaining 7 during the fiscal year 1911. A full statement of work accomplished during the latter year will be found in the report of the Director of Lands. I shall here attempt only briefly to summarize it.

There has been a decrease of 25,683 hectares in the total land occupied, or 15.7 per cent of the total area. The remaining 5.76 per cent of plans and descriptions have been completed. The number of lots sold in excess of the previous year is 20,532. The number of lots sold to the end of the year is 35,522. The number of lots leased is less than during the previous year by 20,052. The total number of lots disposed of by lease or sale is 480 greater than during the previous year. The annual contracted rentals have decreased by ₱241,064.15. The annual contracted installments have increased by ₱359,673.98. The total contracted income has increased by ₱118,609.83. The annual contracted receipts from sales have increased by ₱244,474.60. Administration expenses have increased ₱2,357.34. There has been a total increase in current expenses of ₱23,916.68. On 16 estates the collections exceeded the current expenses. This held for only 12 estates during the previous fiscal year. The surplus for the year was ₱141,898.10 as against ₱61,235.30 for the previous year. The following table shows the progress of each estate to the end of the year, the current and noncurrent expenses, receipts and interest charges, and the surplus and deficit, together with a comparison of totals with those for the previous fiscal year:

*Statement showing progress of friar lands estates during fiscal year ending June 30, 1911.*

Estate.	Areas.	Esti- mated occu- pied.	Percentage of total area, number of lots and area disposed of, and method.				Total disposed of.				Annual contracted receipts excluding interest on deferred payments.		
			By sale.		By lease.		Total disposed of.		Per- cent- age of area.	Area.	From rents.	From sales.	Total.
			Num- ber of lots.	Per- cent- age of estate.	Area.	Num- ber of lots.	Per- cent- age of area.	Area.					
		<i>Per ct.</i>			<i>Hectares.</i>			<i>Hectares.</i>					
Banilad	1, 872	80	757	27.4	513	351	43.9	822	71.3	1, 335	P1,641.00	P12,356.00	P13,997.00
Biragdag	282	83	49	3.9	11	396	78.7	222	82.6	233	2,099.00	165.27	2,264.27
Brian	3,555	94	2,915	94	3,342				94	3,342		38,380.06	38,380.06
Catamba	13,015	50	1,846	45.7	5,950	9		7	45.8	5,957	125.00	52,014.00	52,139.00
Dampol	926	100	347	79	732				79	732	7,247.73		7,247.73
Guguinto	931	100	681	99.5	928			133	99.5	926	9,197.51		9,197.51
Irus	17,164	55	5,598	45.3	7,783	40	.8		46.1	7,916	1,064.00	102,322.00	103,386.00
Isabela	19,510	96	4,016	72	3,614	73	1.4	69	73.4	3,683	860.00	60,704.00	61,564.00
Laolombay	5,020	98	1,341	89.8	3,156	108	7.8	275	97.6	3,431	2,118.00	26,444.00	28,562.00
Malinta	3,514	38	12	100	12				100			122.00	122.00
Muntinlupa	2,800	87	1,310	66.5	1,863				66.5	1,863	36.00	38,856.00	38,892.00
Naic	7,271	65	1,226	50.6	3,681	10		2	50.7	3,693		9,068.32	9,068.32
Orion	954	94	639	94	897				94	897	10,552.87		10,552.87
Piedad	3,813	95	597	55.1	2,101	26	15.4	587	70.5	2,688	226.00	13,427.50	13,653.50
San Francisco de Malabon	11,128	50	2,837	49.4	5,498				49.4	5,498	49,847.00	29,846.00	49,847.00
San Jose	22,485	100	2	100	22,485				100	22,485		565.60	565.60
San Marcos de Malabon	87	100	1	100	87				100	87		36,000.00	36,000.00
Santa Cruz de Malabon	9,549	40	1,732	30.8	2,940				30.8	2,940	73.00	33,026.00	33,105.00
Santa Maria de Pandi	10,155	85	1,904	39.2	3,965	7	1	12	39.4	3,997	53,146.00	55,399.00	55,399.00
Santa Rosa	5,251	92	2,041	86.8	4,557	10	4.7	247	91.5	4,804	2,253.00	585.60	13,129.60
Tala	6,992	100	874	73.7	5,150	168	23.7	1,655	97.3	6,805	1,262.00	41,617.00	42,879.00
Talibay-Minglanilla	8,159	60	4,015	18.7	1,525	21	.5	43	19.2	1,568			
Total	a154,445	b63	35,522	52.4	80,867	1,219	2.6	4,074	55	84,941	12,348.60	637,695.86	650,044.46
Total previous year	156,506	76.2	14,990	32	50,076	21,271	38.7	60,549	70.7	110,625	253,412.75	278,021.88	531,434.63

<sup>a</sup>Changes in areas due to final survey, deducting areas occupied by roads, plazas, streams, etc., when actual area available is computed.

<sup>b</sup>The term "Estimated occupied" includes all land however occupied, either by persons, roads, streams, irrigation canals, buildings, etc.

## Statement showing progress of friar lands estates during fiscal year ending June 30, 1911—Continued.

Estate.	Receipts for fiscal year.				Current expenses.				Deficit, fiscal year 1911, each estate.	Surplus, fiscal year 1911, each estate.	Extra-ordinary non-re-current expenses (surveys, preparation plans and descriptions).
	Rents.	Miscellaneous grazing, timber, and stone permits, sale of old timber.	Sales.	Interest on deferred payments.	Recovery of costs in court cases.	Total receipts.	Annual interest on purchase price at 4 per cent.	Administration.	Irrigation maintenance, and repairs.	Total.	
Banilad	₱1,227.08	₱42.00	₱20,482.00	₱6,740.88	₱2.00	₱28,493.96	₱8,749.98	₱1,918.31		₱10,668.29	₱76.96
Binaag	467.00		2,468.00	1,74		2,936.74	1,434.91	1,61.67		1,596.58	2.43
Bifan	809.00		38,943.87	15,293.29	8.00	55,064.16	24,063.33	5,014.03		29,724.03	1,340.16
Calamba	7,589.59	849.73	58,494.00			66,933.32	55,417.73	12,457.01	₱646.67	69,012.14	25,330.13
Dampol	7,892.00		7,392.33	5,090.15		13,374.48	6,025.94	1,268.44	1,137.40	7,294.34	2,566.90
Guiguinto	4.00		9,033.85	6,277.67		15,315.52	6,222.72	1,367.94		7,590.66	47.09
Irus	12,300.84	394.40	108,017.00		377.80	121,090.04	82,880.97	20,232.77	2,567.23	105,680.97	8,823.36
Isabela							12,738.64	2,909.98		15,698.62	19.81
Lolombay	2,448.41	138.50	57,751.00	910.00	182.00	61,428.91	38,929.65	9,393.25	1,492.77	49,815.67	1,363.90
Malinta	1,563.00		25,705.12	16,476.78		43,744.90	17,616.85	4,080.34		21,697.19	53.44
Mantala			123.00	97.64		220.64	67.29	12.44		4,377.59	2.82
Muntinlupa			6,899.81	3,263.48		10,163.29	3,507.08	7,843.41	1,742.42	48,894.59	5,785.70
Naic	457.50	311.00	49,142.54	31,071.73	53.82	81,036.59	39,308.46	8,833.20	27.36	4,782.57	32,142.30
Orion	102.00		9,224.08	2,625.92		11,952.00	3,922.01	3,153.74		16,372.43	7,169.43
Piedad	1,955.50		12,390.50		2.50	14,348.50	13,213.74	3,158.69		56,204.79	536.20
San Francisco de Malabon	222.33	244.00	27,876.00	8,421.70		36,764.03	42,794.99	10,193.19	3,216.61	19,440.76	158.96
San Jose			29,846.00	22,682.96		52,528.96	23,902.57	5,036.50		28,939.07	158.96
San Marcos			565.60	49,497.73		1,063.33	492.99	99.49		592.48	1.28
Santa Cruz de Malabon	2,012.88	136.00	47,476.00			49,624.88	41,496.50	9,680.04	1,942.05	53,118.59	4,843.18
Santa Maria de Pandi	18,566.50	6.00	34,774.00		21.00	53,367.50	42,185.49	11,482.40		54,100.66	3,532.27
Santa Rosa	4,974.00	455.87	29,552.77	18,441.37		53,424.01	36,409.39	7,614.21	721.47	44,745.07	148.37
Tala	269.10		17,051.80	5,845.92		23,166.82	8,694.35	2,177.90		10,872.25	338.15
Talisay-Minglanilla	4,330.62	300.00	39,565.97		2.00	44,198.59	44,311.48	12,164.58		56,476.06	7,393.86
Total	60,191.35	2,877.50	632,775.24	143,738.96	649.12	840,232.17	554,437.02	129,970.30	13,926.75	698,334.07	31,530.69
Total previous year	296,427.29	3,021.92	388,300.64	45,871.84	2,031.00	735,652.69	554,437.02	103,696.28	16,284.09	874,417.39	80,960.85

b Net surplus, fiscal year 1910, ₱61,235.30.

a Net surplus, fiscal year 1911, ₱141,898.10.

The reduction of 13.2 per cent in the total area occupied is due to the fact that the lessee of 19,448 hectares of the Isabelita estate, whose lease expired, declined to purchase, and to the further fact that a number of other lessees of estates placed on sale have surrendered their leases without purchasing as yet. Most of them will doubtless purchase or take out new temporary leases in the end.

#### PROBABLE DECREASE IN COST OF ADMINISTRATION.

As the surveys, subdivisions of parcels, and computations on all estates have now been completed, and as all estates are now on sale, there should be practically no surveying charges hereafter, and the administrative expenses should steadily and quite rapidly decrease. The Acting Director of Lands is of the opinion that a third of one per cent of the value of the property should be sufficient to meet the cost of administration after a few years.

#### SALE OF ESTATES DURING THE FISCAL YEAR 1912.

Seven estates remained unsold at the close of the fiscal year 1910—Piedad, Calamba, Santa Cruz de Malabon, Lolomboy, Santa Maria de Pandi, Imus, and Talisay-Minglanilla, containing an aggregate area of 66,875 hectares. Of this area there have now been sold 27,898 hectares, and leased for periods of three years 851 hectares, leaving available for sale or lease 38,126 hectares, a considerable portion of which can neither be sold or leased except in tracts of considerable size.

The 23 friar estates purchased had an aggregate area of 154,448 hectares. There are now sold 80,867 hectares, and leased for periods of three years 4,073 hectares, the total value of the land sold and leased being ₱11,440,796.90. The contracted income from sales and leases aggregates ₱1,107,044.46, of which ₱650,044.46 is made up of installments of purchase price and of rentals, and ₱457,000 is interest on deferred payments for the first year. Interest on the land sold to date will be reduced approximately ₱26,000 annually during the balance of the twenty-year period.

There remain unsold, unleased and unoccupied 69,509 hectares with a value of ₱6,451,227.42. No income is derived from this land at present, nor will there be any until the land is sold or leased.

## DELINQUENT PAYMENTS.

Collections of rentals due under leases and of installments of purchase price due on sales have been fairly good throughout the year, and it is believed that most of the balances due and unpaid are collectable.

The friar lands records of the Bureau of Lands were sent to Washington on November 7, 1910, and were not again received in Manila until June, 1911. As a result, the work of the Bureau of Lands, and especially that of the friar lands division, was of necessity very seriously hampered. For instance, suits for the recovery of delinquent installments on account of sales could not be instituted without certified true copies of contracts which were, of course, not available during the period above mentioned. The following statement shows the number of suits instituted against lessees and their results:

Suits pending July 1, 1910 .....	289
Filed during the fiscal year 1911 .....	48
Compromised during the fiscal year 1911 .....	65
Executions fiscal year 1911 .....	24
Pending June 30, 1911 .....	248

In view of the very large number of occupants of friar lands, a total of 48 suits brought during the fiscal year is exceedingly small, and on the whole it can be said that purchasers and tenants have shown commendable willingness and gratifying ability to meet their obligations.

## FRIAR LANDS LOANS.

At the close of the year there were outstanding 36 friar lands loans, aggregating ₱53,400. The outstanding loans were all made to persons wishing to cultivate sugar or to purchase and install sugar milling machinery.

## FRIAR LANDS IRRIGATION SYSTEM.

The Bureau of Public Works controls the expenditure of funds allotted for the construction of friar lands irrigation systems. It is understood to have expended approximately ₱50,000 during the year, but has made no report to the Bureau of Lands of the amount or nature of these expenditures. Such report has been requested, and as the Bureau of Lands is called upon to administer these irrigation systems, collect water rents, and to provide for the redemption of the bonds representing the value of the systems, it would seem that it should be promptly forthcoming. Indeed, I am strongly of the opinion that the expenditure of these funds should be subject to the direct control of the bureau.



## WATER RENTS.

It has not been found practicable to begin the collection of water rents during the year. It is now hoped to begin such collections on January 1, 1912. The present irrigation force of the bureau must then be increased in order satisfactorily to perform the increased work.

## PURCHASES OF FRIAR LANDS BY RAILROADS.

The only friar lands ever purchased by railroads have been for rights of way, station yards, and gravel pits. The following table shows the facts:

Estate.	Length of right of way.	Area purchased.			Purchase price.	Name of company.
	<i>Kms.</i>	<i>h.</i>	<i>a.</i>	<i>c.</i>		
Muntinlupa .....	6.4	20	12	10	₱1,944	Manila Railway Co.
Biñan .....	4.1	13	27	35	3,271	Do.
Sta. Rosa .....	5.3	17	31	43	4,421	Do.
Calamba .....	35.1	54	12	02	13,783	Do.
Naic .....	4	15	94	16	4,891	Do.
San Francisco de Malabon .....	4.6	13	97	36	2,269	Do.
Santa Cruz de Malabon .....	10	32	80	02	8,987	Do.
Imus .....	.5	1	69	14	750	Do.
Banilad .....	2.3	10	63	31	8,709	Philippines Railway Co.
Talisay Minglanilla .....	9.3	27	45	00	24,214	Do.
Total .....	81.6	207	31	89	64,530	

## FRIAR LANDS INVESTIGATION.

On June 25, 1910, the House of Representatives of the United States Congress passed the following resolution:

Whereas it has been publicly charged that sales and leases of public lands have been made in the Philippines in violation of law: Now, therefore, be it

*Resolved*, That the House Committee on Insular Affairs be, and it is hereby, empowered and directed to make a complete and thorough investigation of the interior department of the Philippine Government touching the administration of Philippine lands and all matters of fact and law pertaining thereto, whether the same are to be had in the United States, the Philippine Islands, or elsewhere, and to report to the House during this Congress all the evidence taken and their findings and recommendations thereon; that in conducting said inquiry said committee shall have power to subpoena and require the attendance of witnesses, to administer oaths, to require the production of books, papers, and documents, whether of a public or private character, and to employ necessary assistance, legal or otherwise, and make necessary expenditures, the cost of said investigation to be paid out of the contingent fund of the House. The powers hereby conferred may be exercised while the House is in session or during the recess of Congress by the committee or any duly appointed subcommittee thereof.

On November 7, 1910, the Executive Secretary, the Director of Lands, the Attorney-General, Hon. Rafael del Pan, who served

the Insular Government as an attorney in connection with the friar lands purchase, and the Secretary of the Interior sailed for the United States to act as witnesses in this investigation, reporting in Washington on December 9. In the hope of anticipating the wishes of the Committee on Insular Affairs, there were also taken the complete records of the friar lands division, and all public land records which it was deemed likely that the committee might desire to see. The very few additional records subsequently requested, which through oversight or lack of foresight were not forwarded at the outset, were cabled for and promptly obtained. Every question asked Government witnesses or other witnesses during the investigation was answered, the attorneys of Messrs. Havermeyer, Welch, and Senff waiving all questions of privilege, with the consent of their clients granted in advance. Every document requested was produced. Representative John A. Martin, of Colorado, who made upon the floor of the House the original charges, became suddenly conservative when called before the committee and requested to state specifically charges which should form the basis for an investigation. He signally failed to repeat the most detailed and most serious of the charges which he originally preferred; a fact which I very greatly regretted. A comparative study of his original charges made on the floor of the House and of his charges made before the Committee on Insular Affairs is highly instructive and I commend it to all persons especially interested in this matter. The outcome of this investigation was most satisfactory to the Philippine officials concerned.

The findings of the majority of the committee and those of the dissenting members are appended hereto as Exhibits A and B.

The minority report signed by five of the Democratic members, namely, Messrs. W. A. Jones, Robert N. Page, Finis J. Garrett, M. R. Denver, and Harvey Helm, contains an extraordinary misstatement, which was perhaps nevertheless justified by such evidence as was before the committee, relative to the cause and result of an action for libel brought by me against the editors and owners of a certain Manila newspaper. The statement in question reads as follows:

Among the lessees of public lands are E. L. Worcester, nephew of Secretary of the Interior, Dean C. Worcester. For criticizing the granting of this lease several of the editors and proprietors of a Filipino newspaper, one of whom is a member of the Philippine Assembly, have been sentenced to the penitentiary, and in a civil suit been adjudged to pay to Secretary Worcester heavy damages.

Perusal of *the libelous article itself*, which is appended hereto as Exhibit C, will show how absolutely erroneous is this statement.

I assume that the gentlemen in question would have been the last to make it had the facts been fully brought out, or had the libelous article itself been placed in evidence.

Pending possible action by Congress imposing limitation as to the area of friar lands which may be sold to an individual, these lands are not being thus sold in tracts exceeding 16 hectares in extent, except pursuant to contracts entered into prior to the time when this subject was first agitated.

It is very important that Congress should declare its approval of the policy, relative to the sale of vacant friar lands, which had been pursued prior to that date, or should provide by legislative enactment for such change in that policy as it may deem to be in the public interest.

As previously stated, 69,509 hectares of unoccupied friar lands, valued at ₱6,451,227.42, remain unsold, unleased, and unoccupied. There are no would-be small tenants or purchasers to whom any considerable portion of this land can be leased or sold. As it would have been obviously unjust to add its cost and the interest on its purchase price to the cost of the lands which it was possible to sell, there is no way in which the bonds issued to obtain the funds with which it was purchased can be retired upon maturity, except by direct appropriation from the Philippine treasury (which in my opinion and in the opinion of eminent Filipinos better able to judge than I myself, would be resented by the Filipino people) or by appropriation by Congress. As the majority report of the Committee on Insular Affairs very clearly sets forth, there exists no legal obstacle to the sale of these lands in large tracts. Such sale of most of the vacant lands would, it is believed, be feasible in the end, and would nearly or quite reimburse the Insular Government for all expenses incurred; but, pending further expression of the will of Congress in the premises, no sales of tracts exceeding 16 hectares in extent are being made.

These unoccupied friar lands were necessarily acquired in connection with the purchase of the thickly settled lands which it was deemed desirable for the Government to buy in order that the latter might be sold to their occupants, and that a serious agrarian question might thus be satisfactorily terminated. If they are to be "held in trust" for people who do not want them, is it not unjust to tax these people in order to pay for them? In other words, if Congress should legislate to the effect that

the vacant friar lands might not be sold to individuals in tracts exceeding 16 hectares in extent, thus rendering their sale impossible, should not Congress at the same time appropriate funds to reimburse the Philippine treasury for the cost to it of the lands thus rendered unsalable?

#### HOMESTEADS.

I am very glad to report that there has been a marked increase during the year in the interest taken by Filipinos in securing homesteads. The number of applications received has been 2,789, and while it is ridiculously small, it is nevertheless the largest number received during any year since the Public Land Law became effective, and is almost double that for the previous fiscal year. The extraordinary apathy displayed by the Filipino people during the period when most heads of families might readily have secured title to 40 acres each under the free patent chapter of the Public Lands Act without any expense whatever, was very keenly regretted by all who had the best interests of the Islands at heart. The continued indifference of the people at large toward the opportunity to acquire sufficient land at a nominal price by homesteading it has been a further source of regret. It has been suggested that disinclination to live on the land is one of the reasons why more Filipinos do not file homestead applications. While there was formerly in many, if not most, provinces reason for such disinclination in the lack of security for life and property which then prevailed, the condition of public order which has been brought about since the American occupation takes away this reason and we must look further for the true explanation.

It is a regrettable fact that many *caciques* have actively interested themselves in preventing would-be homesteaders from acquiring public lands, preferring to have such persons remain without lands of their own so that they themselves could be more certain of retaining them as laborers at a low wage.

Protests against homestead applications are growing more frequent. An investigation of some 250 contests showed that in 90 per cent of the cases there was no foundation for them.

A number of requests for cancellation of homestead entries have been received which upon investigation were found to be frauds or forgeries, having been made without the knowledge of the true applicants.

Investigation of a majority of homestead entries the applications for which were filed five or more years ago *shows that about 5 per cent of the applicants have not cultivated any part*

*of the land applied for; that the average area cultivated is 4 hectares; and that at least 50 per cent of the applicants are not complying with the law relative to residence. The value of improvements varies from ₱1 to ₱50, the average cost of the houses erected being estimated at ₱30. A number of final proofs have been received in which the applicant states that he has built a house to the value of ₱1 (\$0.50), and has resided therein for a period of five years.*

#### SALES OF PUBLIC LANDS.

There have been received 91 applications to purchase public lands, an increase of 23 over the previous fiscal year. The total area covered is 3,496 hectares. Thirty-three sales were made during the year. The total amount of cash paid in on account of these sales was ₱13,755.25, and although this is nearly equal to the amount received from all previous sales since the Public Land Act went into effect, it is indeed ridiculously small for a country with at least 50,000,000 acres of agricultural public lands on its hands. Five sales were made to corporations and two to unincorporated companies. Competitive bids were received in only four cases, but one parcel of land was sold at the rate of ₱102.50 per hectare, a hitherto unprecedented price. When, as is almost invariably the case, there is no competitive bidding, public land is sold at the minimum lawful price of ₱10 per hectare. The following are the total sales transactions in public lands from July 26, 1904, when the Public Land Act took effect, to and including June 30, 1911:

There have been 423 applications covering 13,671 hectares. Of these 50, covering 1,791 hectares, have been rejected, canceled or withdrawn. The number of sales actually accomplished has been 88 and the area covered by such sales is 8,124 hectares. And yet we hear talk of the "exploitation" of Philippine public lands.

#### RECOMMENDATION THAT EXISTING PROVISIONS OF LAW, RELATIVE TO THE SALE OF PUBLIC LANDS, BE MADE MORE LIBERAL.

I can only reaffirm the statements and recommendations as to the liberalization of existing provisions of law relative to the sale of agricultural and mineral public lands, which I have monotonously reiterated annually since the public land act took effect. The Philippines are an essentially agricultural country. They are almost unprecedently rich in unoccupied, uncultivated, well-watered agricultural public lands. Their people are expending annually millions of pesos for imported rice, when they

ought to export it in large quantities. The Islands are capable of producing a very considerable proportion of the tropical products imported into the United States. It can be confidently asserted that nowhere in the world are there to be found conditions of soil and climate better suited to the production of coconuts, rubber, gutta-percha, coffee, and cacao, while the Islands have a monopoly on the production of abacá, or Manila hemp, but existing agricultural methods are primitive in the extreme. Important mineral deposits are known to exist. There is at present a lamentable lack of capital for the legitimate development of all these enormous natural resources, and there are a large number of unemployed laborers, willing and able to render efficient service if they can obtain a living wage. The daily wage was, prior to American occupation, pitifully small. While it has since materially increased, it is still small. If any proof is needed as to the benefits to wage earners resulting from the introduction of capital, it is found in the fact that the daily wage in Mindoro has more than doubled since there began the conversion of the previously uncultivated lands of the San José friar estate into a modern sugar plantation.

The local agriculturist most readily learns the benefits arising from the use of modern machinery and the employment of modern agricultural methods *by personal observation of results*, and the establishment of a series of good-sized modern plantations in these Islands would, in my opinion, be an unmixed blessing to the inhabitants. The existing limitation on the amount of public land which may be sold an individual to 40 acres is simply ridiculous, and, of course, absolutely prevents the acquisition by any individual of land enough to justify him in entering commercially upon such an enterprise as the cultivation of rice, which is the bread of the people and which it is now necessary to import in large quantities. How long must we continue to send millions of pesos annually to foreign countries for the purchase of this article of fundamental necessity for the reason that the enormous tracts of fertile and unoccupied rice lands now lying idle in these Islands cannot be purchased by individuals in sufficient amount to justify the use of modern agricultural machinery, *or indeed to justify entering at all into the rice-growing business?* What man, in his senses, would seriously contemplate raising rice commercially on a 40-acre tract?

There are in the Philippine Islands to-day, at a conservative estimate, 50,000,000 acres of unoccupied, unclaimed, cultivable public lands. The Islands are easily capable of supporting a population of 100,000,000 and now have about 8,000,000 inhab-

itants. It is certain that their great natural resources should not be thrown open to reckless exploitation, but the facts set forth in this report relative to the total sales and leases of public lands show how absolutely without foundation are the charges that anything of this sort has occurred, or is likely to occur. Is it not just as plainly the duty of the United States to make possible the *legitimate development* of the agricultural and mineral resources of the Philippines as it is to prevent the reckless or wasteful exploitation of these resources? It is my opinion that it is. I, therefore, reiterate the recommendations made in my last annual report relative to the amendment of existing laws concerning the sale of agricultural and mineral public lands.

#### LEASES OF PUBLIC LANDS.

It has been the consistent policy of the Department of the Interior to lease public lands both to individuals and to corporations in the largest possible amounts up to the lawful maximum (1,024 hectares to a corporation or to an individual) for the maximum period (25 years with the privilege of renewal for a like period), and at the minimum legal rental (₱0.50 per hectare, or 10 cents gold per acre per year). The terms would certainly seem sufficiently advantageous, yet neither during the past year nor during any previous year has there been manifested a desire on the part of any considerable number of persons to take advantage of them. During the year just ended only 44 lease applications were received, or 30 less than during the previous year. These applications covered an area of but 12,400 hectares. Three individuals and one company each applied for the maximum lawful area. All other applications were for lesser tracts. The leases actually issued during the year were 4 in number and covered an area of 2,137 hectares.

During the period from July 26, 1904, to and including June 30, 1911, there have been 229 lease applications covering 61,903 hectares of public lands. Of these, 79 covering 20,579 hectares, have been rejected, canceled, or withdrawn.

#### FREE PATENTS.

The investigations required under the provisions of section 34 of the Public Land Act have continued during the year. Inspectors have been instructed to give applicants the benefit of every possible doubt, yet fully 25 per cent of the applications thus far investigated have necessarily been rejected for the reason that the land applied for had in reality never been cultivated, or had been abandoned for so long a period of time

that the law could not be stretched to cover it. A wide difference has been found as to conditions in different districts. In some the percentage of applicants not entitled to patents runs as high as 80, while in others practically all of the applicants come within the provisions of section 32 of the Public Land Act. Two hundred and seventy-nine free patents have been issued during the year. The total number of free patent applications made before the end of the period during which they could lawfully be filed has been increased by 8, this apparent anomaly being due to the fact that this number of duly drawn applications were found in the possession of a municipal secretary who had never forwarded them, although they had been seasonably filed with him. The total number of free patent applications filed during the lawful period was 15,885, covering 52,050 hectares of land.

Of these 2,477, covering 12,328 hectares of land, have necessarily been rejected or canceled.

#### COMPULSORY REGISTRATION UNDER THE PROVISIONS OF SECTION 61 OF THE PUBLIC LAND ACT.

Under the provisions of section 61 of the Public Land Act actions are brought by the Director of Lands, after executive approval, to settle boundaries which are vague and undetermined. Pursuant to this authority and to a friendly understanding first had with many of the persons concerned, action was begun by the Director of Lands in the court of land registration to determine titles to certain lands in the municipality of Asingan, Province of Pangasinan, the total area concerned being 604 hectares, within which there were claimed 906 lots with a total area of 509 hectares, the balance consisting of public land, roads, rivers and small streams. The petition asked that, after a proper hearing, the court determine all property rights within the area described, and order the issuance of title to all persons justly entitled to the same. A proper form was prepared in the office of the Director of Lands for the use of the several lot owners. An employee of the Bureau was appointed notary public for the province of Pangasinan in order that the necessary affidavits might be sworn to without expense to the claimants. Sixty lots per day were disposed of, the trial of the case lasting about three weeks. This action was really brought in order to assist the land holders to obtain title to their holdings at a minimum expense, and to differentiate private lots from public lands in the area in question. At the outset there was a good deal of apathy on the part of land holders, but the people soon began to see the advantages of the opportunity offered them, and to understand that it was



not the purpose of the Government to deprive them of their holdings, but on the contrary that the Government was aiding them in obtaining titles thereto. The result was all that could have been desired, and numerous inquiries, and requests that the same sort of work be undertaken in other districts, have been received.

The beneficial results of this procedure are:

1. Greatly reduced cost of survey to property owners.
2. Great reduction in the court costs incident to obtaining title.
3. Sessions of court held in the municipality where lands are situated and consequent avoidance of heavy traveling expenses and cost of maintenance of witnesses in provincial capitals.
4. Greater assurance of accuracy in surveys.
5. The availability of lot plans for the assessment of land taxes.
6. The value of lot plans for irrigation projects whether private or public.
7. The value of the plans for use in the location of geographical features, such as boundaries of barrios, municipalities and provinces.
8. The fixing of roads, streets and rights of way.
9. The segregation of the public domain from private holdings.

#### LEASES OF FORESHORE AND LANDS UNDER WATER.

Only one application to lease foreshore or lands under water under Act 1654 has been received during the year. In connection with applications previously received a survey was made at Mercedes, Ambos Camarines, and two leases were actually executed, one for 99 years covering slightly less than 39 hectares at an annual rental for the first 10 years of ₱300. The other for 40 years covering an area of 773 square meters at an annual rental of ₱30.

#### WORKING FORCE OF THE BUREAU.

There has been an increase of 9 in the total force employed by the bureau during the year. There were an average of 161 men engaged in office work and 101 men in field work as against 168 and 84, respectively, for the previous fiscal year. The Director of Lands states that the ability shown by the Filipino junior surveyors trained in the bureau, who are at present working in the field, warrants the statement that a force of 100 such surveyors with 40 American chiefs of party could have done the field work of the bureau during the year at a

greatly reduced cost. It is anticipated that 17 additional junior surveyors will be graduated during the year, making 50 available for field work.

The work of the bureau is still handicapped by the constant resignation of its more experienced surveyors, many of whom accept better positions with other bureaus of the Government. A surveyor with three or four years experience is worth at least ₱3,600 per year, and I concur in the recommendation of the Acting Director of Lands that there be provided an increased number of surveyor's positions at ₱3,600, ₱4,000, and ₱4,500. It will be necessary in the near future to increase the computing and drafting force of the bureau in order to take care of the large number of cadastral surveys soon to be received from field parties, and here again a scale of salaries should be provided which will allow the promotion and permanent retention of the more competent men.

A very much fuller and more detailed statement of the work of the Bureau of Lands than can be included in this report will be found in the annual report of the Acting Director (Exhibit I).

#### RECOMMENDATIONS.

For convenience of reference, I will here summarize the recommendations made in this report, giving in each case the page or pages on which the recommendation occurs:

1. Page 24: That a specific amount be appropriated by the Philippine Legislature to defray the traveling expenses of impecunious persons brought from the provinces to the Philippine General Hospital, in order that they may receive medical or surgical treatment.

2. Page 37: That legislation be enacted providing for scholarships at the Forest School for one student from each of the following provinces: Nueva Vizcaya, Agusan, the Mountain Province, and the Moro Province.

3. Page 37: That provision be made in the appropriation bill for the next fiscal year for the employment by the Bureau of Forestry of competent students in, and graduates from, the Forest School.

4. Pages 44 to 46: That a reasonable fixed percentage of the revenues derived from forest products be set aside for the support of the Bureau of Forestry.

5. Page 47: That the sum of ₱40,000 be included in the next annual appropriation bill for the construction of a building for the Bureau of Science, to house the machinery for the testing of cement, concrete, road materials, rope, wire, steel, etc.

6. Page 48: That permanent quarters be provided for the Iloilo sugar laboratory.

7. Page 49: That there be established a reimbursable fund of ₱5,000 for the reissue of Bureau of Science publications which are sold at their approximate cost, which are or may be out of print, and for which there is a continuing demand.

8. Pages 52 to 53: That there be included in the next appropriation bill an allotment to the Bureau of Science of ₱21,500 for the study of dangerous communicable animal diseases. The purposes for which this sum is needed will be found set forth in full in the annual report of the Director of the Bureau of Science.

9. Page 54: That legislation be enacted to prevent the introduction into the Philippines of dangerous communicable plant diseases.

10. Page 54: That provision be made at the next session of the Philippine Legislature for an increase in the working force of the Division of Chemistry of the Bureau of Science in order that it may be possible for that division to keep pace with the increasing routine work.

11. Page 55: That an effort be made to secure legislation doing away with export duties on manganese and iron ores, to the end that commercial development of Philippine deposits of these ores may be possible.

12. Page 62: That control of the expenditure of funds allotted for the construction and maintenance of friar lands irrigation works be vested in the Director of Lands, who now administers these irrigation systems and whose duty it will be to collect water rents and to provide for the redemption of the bonds representing the cost of the systems.

13. Pages 67 to 69: That existing legislation relative to the sale of public lands be made more liberal.

14. Page 72: That there be provided, in the Bureau of Lands, an increased number of surveyors' positions at salaries of ₱3,600, ₱4,000, and ₱4,500, respectively.

Respectfully submitted.

*Dean C. Worcester*  
Secretary of the Interior.

To the PHILIPPINE COMMISSION,  
Manila, P. I.